

## **PERSONAL INFORMATIONS**

Name and Surname      **BOGGIO ELENA**  
                                 Phone      +390321660658  
                                 E-mail      elena.boggio@med.uniupo.it

Nationality      Italian

## **POSITIONS**

- Date (from – to)      **MAY 2016-TO DATE**  
                                 Novaicos s.r.l.s.-Novara, Italy.  
                                 Spin-off  
                                 CTO, Co-Founder, and Member Board
  
- Date ( from – to)      **SEPTEMBER 2018-TO DATE**  
                                 Dep. Health Sciences, Università del Piemonte Orientale, Novara, Italy.  
  
                                 Senior Post-Doc  
                                 “ Role of ICOS/B7h/Osteopontin system in the tumor development as  
                                 novel therapeutic targets ”
  
- Date (from – to)      **FEBRUARY 2018-AUGUST 2018**  
                                 Dep. Health Sciences, Università del Piemonte Orientale, Novara, Italy.  
                                 Senior Post-Doc  
  
                                 “Role of LIGHT and its ligands in multiple sclerosis ”
  
- Date (from – to)      **FEBRUARY 2017-JANUARY 2018**  
                                 Dep. Health Sciences , Università del Piemonte Orientale, Novara, Italy.  
                                 Senior Post-Doc  
  
                                 “ Study of the role of immunomodulatory molecules in susceptibility to  
                                 multiple sclerosis”
  
- Date (from – to)      **FEBRUARY 2015-JANUARY 2017**  
                                 Dep. Health Sciences , Università del Piemonte Orientale, Novara, Italy.  
                                 Senior Post-Doc  
  
                                 "Role of B7h in tumor development"

- Date (from – to) **FEBRUARY 2014- JANUARY 2015**  
Dep. Of Drug Science and Technology, Università degli Studi di Torino,  
Turin, Italy.  
Senior Post-Doc

“Release of drugs carried in nanosponges in prostate cancer”

- Date (from – to) **FEBRUARY 2010- JANUARY 2014**  
Dep. Health Sciences, Università del Piemonte Orientale, Novara.  
Post-Doc

Search for new adjuvants for the use of vaccines in autoimmune diseases”

## **EDUCATION**

- Date **March 2010**  
Dep. Health Sciences, Università del Piemonte Orientale, Novara.  
PhD thesis: “Role of Osteopontin in sepsis and in the development of Autoimmune Lymphoproliferative Syndrome”,  
**PhD in Molecular medicine**

- Date **July 2016**  
Dep. Drug Sciences, Università del Piemonte Orientale, Novara.  
  
titolo della tesi: “Hsp90 inhibitors induce the degradation of Ron and counteract the transforming activity of the oncogene RonM1254T”,  
**Master Degree in Medical and Pharmaceutical Biotechnologies**

- Date **July 2014**  
Dep. Drug Sciences, Università del Piemonte Orientale, Novara.  
  
“Generation of constructs expressing the Ron receptor and the oncogenic mutant RonM1254T”  
**Bachelor Degree in Biotechnology**

**Technical skills and competences:** primary and immortalized cell cultures, cell purifications with magnetic beads, transient and stable transfection, ELISA, immunofluorescence with flow cytometric analysis, protein purification, RT-PCR and Real-Time PCR, Western Blot, RNA extraction.

1. Rolla R, Puricelli C, Bertoni A, **Boggio E**, Gigliotti CL, Dianzani U. Platelet: a "multiple choice" effector cell in the immune response with a role in covid-19. *manuscript in preparation Intern. J. of Molec. Science.*
2. Fiorilli S, Pagani M, **Boggio E**, Gigliotti CL, Pontremoli C, Dianzani U, Vitale Brovarone C. Strontium containing Mesoporous Bioactive Glasses bio-functionalised with ICOS-Fc molecule: a multifunctional platform to promote fracture healing. *manuscript in preparation for Nanomaterials.*
3. Gigliotti CL\*, **Boggio E\***, Favero F, Incarnato I, Santoro C, Oliviero S, Corà D, Dianzani U, Zucchelli S. Specific transcriptional programs differentiate ICOS and CD28 co-stimulatory signals in human naïve CD4<sup>+</sup> T cells. *manuscript in preparation for Frontiers in Immunology.*
4. Lucchini E, Palandri F, Volpetti S, Vianelli N, Auteri G, Rossi E, Patriarca A, Carli G, Barcellini W, Rotondo F, Consoli U, Valeri F, Santoro C, Crea E, Vignetti M, **Boggio E**, Gigliotti, CL, Dianzani U, Giardini I, Carpenedo M, Rodeghiero F, Fanin R, Zaja F. ELTROMBOPAG AS SECOND LINE THERAPY IN ADULT PATIENTS WITH PRIMARY IMMUNE THROMBOCYTOPENIA (ITP) IN ATTEMPT TO ACHIEVE LONG-TERM REMISSION. UPDATED RESULTS OF A PHASE II, MULTICENTER, PROSPECTIVE STUDY BY GIMEMA GROUP (THE ESTIT STUDY) *submitted*
5. Zuccalà M\*, Barizzone N\*, **Boggio E\***, Gigliotti L\*, Sorosina M, Basagni C, Bordoni R, Clarelli F, Anand S, Mangano E, Vecchio D, Corsetti E, Martire S, Perga S, Ferrante D, Gajofatto A, Ivashynka A, Solaro C, Cantello R, Martinelli V, Comi G, Filippi M, Esposito F, Leone M, De Bellis G, Dianzani U, Martinelli-Boneschi F, D'Alfonso S. Genomic and functional evaluation of TNFSF14 in multiple sclerosis susceptibility. *submitted*
6. Savastio S, Cadario F, D'Alfonso S, Stracuzzi M, Pozzi E, Raviolo S, Rizzollo S, Gigliotti L, **Boggio E**, Bellomo G, Basagni C, Bona G, Dianzani U, Prodam F. Vitamin D Supplementation modulates ICOS<sup>+</sup> and ICOS<sup>-</sup> regulatory T cell in siblings of Children with Type 1 Diabetes. *J. of Clinical Endocrinology & Metabolism*, 2020.
7. Raineri D, Dianzani C, Cappellano G, Maione F, Baldanzi G, Iacobucci I, Clemente N, Baldone G, **Boggio E**, Gigliotti L, Boldorini R, Rojo JM, Monti M, Birolo L, Dianzani U, Chiocchetti A. Osteopontin binds ICOSL promoting tumor metastatization, *Communications Biology*, 2020.
8. Dianzani C , Monge C, Miglio G, Serpe L, Martina K, Cangemi L, Ferraris C, Mioletti S, Osella S, Gigliotti CL, **Boggio E**, Clemente N, Dianzani U, Battaglia L Nanoemulsions as delivery systems for poly-chemotherapy aiming to melanoma treatment. *Cancers* 2020, 12, 1198.
9. Clemente N\*, **Boggio E\***, Gigliotti CL\*, Raineri D, Ferrara B, Miglio G, Argenziano M, Chiocchetti A, Cappellano G, Trotta F, Caldera F, Capucchio MT, Yagi J, Rojo JM, Renò F, Cavalli R, Dianzani C, Dianzani U. Immunotherapy of experimental melanoma with ICOS-Fc loaded in biocompatible and biodegradable

- nanoparticles. *J Control Release*. 2020;320:112-124.
10. Argenziano M, Gigliotti CL, Clemente N, **Boggio E**, Ferrara B, Trotta F, Pizzimenti S, Barrera G, Boldorini R, Bessone F, Dianzani U, Cavalli R, Dianzani C. Improvement in the Anti-Tumor Efficacy of Doxorubicin Nanosponges in In Vitro and in Mice Bearing Breast Tumor Models. *Cancers (Basel)*. 2020;12(1).
  11. Moia R., **Boggio E.**, Gilgliotti CL., Crisà E., DePaoli L., Margiotta G., Rolla R., Patriarca A., Gaidano G., Dianzani U., Bruna R. Anti-rasburicase antibodies induce clinical refractoriness by inhibiting the enzyme catalytic activity. *Hematol Oncology* 2020;38(2):204-206.
  12. Clemente N, Argenziano M, Gigliotti CL, Ferrara B, **Boggio E**, Chiocchetti A, Caldera F, Trotta F, Benetti E, Annaratone L, Ribero S, Pizzimenti S, Barrera G, Dianzani U, Cavalli R, Dianzani C. Paclitaxel-Loaded Nanosponges Inhibit Growth and Angiogenesis in Melanoma Cell Models. *Front Pharmacol*. 2019;10:776.
  13. Stella B, Peira E, Dianzani C, Gallarate M, Battaglia L, Giliotti CL, **Boggio E**, Dianzani U, Dosio F. Development and Characterization of Solid Lipid Nanoparticles Loaded with a Highly Active Doxorubicin Derivative. *Nanomaterials*, 2018;8(2).
  14. Clemente N, Ferrara B, Gigliotti CL, **Boggio E**, Capucchio MT, Biasibetti E, Schiffer D, Mellai M, Annovazzi L, Cangemi L, Muntoni E, Miglio G, Dianzani U, Battaglia L, Dianzani C. Solid lipid nanoparticles carrying temozolomide for melanoma treatment. Preliminary in vitro and in vivo studies. *Int J of Mol Sci.*, 2018; 24:19(2).
  15. Vaschetto R, Clemente N, Pagni A, Esposito T, Longhini F, Mercalli F, **Boggio E**, Boldorini R, Chiocchetti A, Dianzani U, Navalesi P. A double blind randomized experimental study on the use of IgM-enriched polyclonal immunoglobulins in an animal model of pneumonia developing shock. *Immunobiology*, 2017;222(12):1074-1080.
  16. Clemente N, Comi C, Raineri D, Cappellano G, Vecchio D, Orileri E, Gigliotti CL, **Boggio E**, Dianzani C, Sorosina M, Martinelli Boneschi F, Caldano M, Bertolotto A, Ambrogio L, Sblattero D, Cena T, Leone M, Dianzani U, Chiocchetti A. Early detection of anti-osteopontin antibodies has a prognostic value for multiple sclerosis patients and vaccination inducing them improves experimental autoimmune encephalomyelitis. *Frontiers in Immunology*, 2017;8(321):1-12.
  17. Gigliotti CL, Ferrara B, Occhipinti S, **Boggio E**, Barrera G, Pizzimenti S, Giovarelli M, Fantozzi R, Chiocchetti A, Argenziano M, Clemente N, Trotta F, Marchiò C, Annaratone L, Boldorini R, Dianzani U, Cavalli R, Dianzani C. Enhanced cytotoxic effect of Camptothecin nanosponges in anaplastic thyroid cancer cells in vitro and in vivo on orthotopic xenograft tumors. *Drug Delivery*, 2017;24(1):670-680.
  18. Dianzani C, Bellavista E, Liepe J, Verderio C, Martucci M, Santoro A, Chiocchetti A, Gigliotti C, **Boggio E**, Ferrara B, Riganti L, Keller C, Janek K, Niewianda A, Fenoglio C, Sorosina M, Cantello R, Kloetzel PM, Stumpf M, Paul F, Ruprecht K, Galimberti D, Martinelli Boneschi F, Comi C, Dianzani U, Mishto M. Extracellular proteasome-osteopontin circuit regulates cell migration with implications in multiple sclerosis. *Sci Rep.*, 2017;9(7):43718.
  19. **Boggio E**, Gigliotti CL, Rossi D, Toffoletti E, Cappellano G,

- Clemente N, Puglisi S, Lunghi M, Cerri M, Vianelli N, Cantoni S, Tieghi A, Beggiato E, Gaidano G, Comi C, Chiocchetti A, Fanin R, Dianzani U, Zaja F. Decreased function of Fas and variations of the perforin gene in adult patients with Primary Immune Thrombocytopenia. *Br J Haematol.*, 2017;176(2):258-267. **Editorial: Bussel JB, Cooper N. Immune thrombocytopenia: a need for assisted suicide. Br J Haematol.**, 2017;176(2):154.
20. Clemente N, Raineri D, Cappellano G, **Boggio E**, Favero F, Soluri MF, Dianzani C, Comi C, Dianzani U, Chiocchetti A. Osteopontin Bridging Innate and Adaptive Immunity in Autoimmune Diseases. *J of Immunol Res.*, 2016, 2016:7675437.
  21. Gigliotti CL\*, **Boggio E\***, Clemente N, Shivakumar Y, Toth E, Sblattero D, D'Amelio P, Isaia G, Dianzani C, Yagi J, Rojo JM, Chiocchetti A, Boldorini R, Bosetti M, Dianzani U. ICOS-Ligand triggering impairs osteoclast differentiation and function in vitro and in vivo. *J Immunol.*, 2016;197(10):3905-3916.
  22. **Boggio E**, Dianzani C, Gigliotti CL, Soluri MF, Clemente N, Cappellano G, Toth E, Raineri D, Ferrara B, Comi C, Dianzani U, Chiocchetti A. Thrombin cleavage of Osteopontin modulates its activities in human cells in vitro and mouse experimental autoimmune encephalomyelitis in vivo. *J Immunol Res.*, 2016;2016:9345495.
  23. Gigliotti CL, Minelli R, Cavalli R, Occhipinti S, Barrera G, Pizzimenti S, Cappellano G, **Boggio E**, Conti L, Fantozzi R, Giovarelli M, Trotta F, Dianzani U, and Dianzani C. In Vitro and In Vivo Therapeutic Evaluation of Camptothecin-Encapsulated  $\beta$ -Cyclodextrin Nanosponges in Prostate Cancer. *J Biomed Nanotechnol.*, 2016; 12(1):114-127.
  24. Clemente N, **Boggio E**, Gigliotti CL, Orilieri E, Cappellano G, Toth E, Valletti PA, Santoro C, Quinti I, Pignata C, Notarangelo LD, Dianzani C, Dianzani I, Ramenghi U, Dianzani U, Chiocchetti A. A mutation in caspase-9 decreases the expression of BAFFR and ICOS in patients with immunodeficiency and lymphoproliferation. *Genes Immun.*, 2015;16(2):151-61.
  25. Vaschetto R, Navalesi P, Clemente N, **Boggio E**, Valsecchi S, Olivieri C, Soluri MF, Kroumova V, Fonio P, Dinatale C, Borrè S, Fortina G, Umberto D, Della Corte F, Chiocchetti A. Osteopontin induces soluble urokinase-type plasminogen activator receptor production and release. *Minerva Anestesiol.*, 2015;81(2):157-65.
  26. Cappellano G, Woldetsadik AD, Orilieri E, Shivakumar Y, Rizzi M, Carniato F, Gigliotti CL, **Boggio E**, Clemente N, Comi C, Dianzani C, Boldorini R, Chiocchetti A, Renò F, Dianzani U. Subcutaneous inverse vaccination with PLGA particles loaded with a MOG peptide and IL-10 decreases the severity of experimental autoimmune encephalomyelitis. *Vaccine.* 2014;29;32(43):5681-9.
  27. Dianzani C, Minelli R, Gigliotti CL, Occhipinti S, Giovarelli M, Conti L, **Boggio E**, Shivakumar Y, Baldanzi G, Malacarne V, Orilieri E, Cappellano G, Fantozzi R, Sblattero D, Yagi J, Rojo JM, Chiocchetti A, Dianzani U. B7h Triggering Inhibits the Migration of Tumor Cell Lines. *J Immunol.*, 2014;192(10):4921-31.
  28. **Boggio E**, Clemente N, Mondino A, Cappellano G, Orilieri E, Gigliotti CL, Toth E, Ramenghi U, Dianzani U, Chiocchetti A. IL-17 protects T cells from apoptosis and contributes to development of ALPS-like phenotypes. *Blood*, 2014;123(8):1178-86. **Editorial:**

- Teachey DT. Targeting cytokines in ALPS: it's FASHionable. Blood. 2014;123(8):1116-8.**
29. **Boggio E**, Aricò M, Melensi M, Dianzani I, Ramenghi U, Dianzani U, Chiocchetti A. Mutation of FAS, XIAP, and UNC13D Genes in a Patient With a Complex Lymphoproliferative Phenotype. *Pediatrics*, 2013;132(4):e1052-8.
  30. Aricò M, **Boggio E**, Cetica V, Melensi M, Orilieri E, Clemente N, Cappellano G, Buttini S, Soluri MF, Comi C, Dufour C, Pende D, Dianzani I, Ellis SR, Pagliano S, Marcenaro S, Ramenghi U, Chiocchetti A, Dianzani U. Variations of the UNC13D gene in patients with autoimmune lymphoproliferative syndrome. *PLoS One*, 2013;8(7):e68045.
  31. Mesturini R, Gigliotti CL, Orilieri E, Cappellano G, Soluri MF, **Boggio E**, Woldetsadik A, Dianzani C, Sblattero D, Chiocchetti A, Yagi J, Rojo JM, Dianzani U. Differential induction of IL-17, IL-10, and IL-9 in human T helper cells by B7h and B7.1. *Cytokine*, 2013;64(1):322-30.
  32. Occhipinti S, Dianzani C, Chiocchetti A, **Boggio E**, Clemente N, Gigliotti CL, Soluri MF, Minelli R, Fantozzi R, Yagi J, Rojo JM, Sblattero D, Giovarelli M, Dianzani U. Triggering of B7h by the ICOS modulates maturation and migration of monocyte-derived dendritic cells. *J Immunol.*, 2013;190(3):1125-34.
  33. **Boggio E**, Melensi M, Bocca S, Chiocchetti A, Comi C, Clemente N, Orilieri E, Soluri MF, D'Alfonso S, Mechelli R, Gentile G, Poggi A, Salvetti M, Ramenghi U, Dianzani U. The -346T polymorphism of the SH2D1A gene is a risk factor for development of autoimmunity/lymphoproliferation in males with defective Fas function. *Hum Immunol.*, 2012;73(5):585-92.
  34. Cappellano G, Orilieri E, Woldetsadik AD, **Boggio E**, Soluri MF, Comi C, Sblattero D, Chiocchetti A, Dianzani U. Anti-cytokine autoantibodies in autoimmune diseases. *Am J Clin Exp Immunol.*, 2012;1(2):136-46.
  35. **Boggio E**, Indelicato M, Orilieri E, Mesturini R, Mazzarino MC, Campagnoli MF, Ramenghi U, Dianzani U, Chiocchetti A. Role of tissue inhibitor of metalloproteinases-1 in the development of autoimmune lymphoproliferation. *Haematologica*, 2010;95(11):1897-904. **Editorial: Rieux-Laucat F., Magerus-Chatinet A. Autoimmune lymphoproliferative syndrome: a multifactorial disorder Haematologica. 2010;95(11):1805-7.**
  36. Vaschetto R, Nicola S, Olivieri C, **Boggio E**, Piccolella F, Mesturini R, Damnotti F, Colombo D, Navalesi P, Della Corte F, Dianzani U, Chiocchetti A. Serum levels of osteopontin are increased in SIRS and sepsis. *Intensive Care Med.*, 2008;34(12):2176-84. **Editorial: Marc Derive, Sébastien Gibot Osteopontin in sepsis: any role? Intensive Care Med., 2008;34(12):2134-5.**
  37. Cappellano G, Orilieri E, Comi C, Chiocchetti A, Bocca S, **Boggio E**, Bernardone IS, Cometa A, Clementi R, Barizzone N, D'Alfonso S, Corrado L, Galimberti D, Scarpini E, Guerini FR, Caputo D, Paolicelli D, Trojano M, Figà-Talamanca L, Salvetti M, Perla F, Leone M, Monaco F, Dianzani U. Variations of the perforin gene in patients with multiple sclerosis. *Genes Immun.*, 2008;9(5):438-44.

## COMMUNICATIONS TO CONGRESSES

- Controlled Release Society (CRS), 7-9 November 2019, Catania. Dianzani C., Cavalleris G., Cangemi L., Serpe L., Martina K., Miglio G., Mioletti S., Dianzani U., Clemente N., Gigliotti CL., Osella S., **Boggio E.**, Battaglia L. Nanoemulsions as delivery systems for poly-chemotherapy aiming to melanoma treatment.
- EORS 2019, 2-5 October 2019, Maastricht, Olanda. C. Vitale-Brovarone, R. Gauthier, G. Montalbano, K. Dalgarno, P. Gentile, A. M. Duarte, L. Moroni, S. Camarero-Espinoza, A. Azevedo, P.A. Quadros, L. Gigliotti, **E. Boggio**, S. Fiorilli. Novel resorbable composite materials to treat osteoporotic fractures: the GIOTTO project.
- EASL-2019. 10-14 April 2019, Vienna-Austria. Ramavath NN, Sutti S, Gadipudi LL, Bozzola C, Clemente N, Gigliotti CL, **Boggio E**, Novo N, Parola M, Dianzani U, Albano E. Role of co-stimulatory signals mediated by ICOS-ICOSL dyad in modulating the evolution of non-alcoholic steatohepatitis (NASH).
- Riunione Scientifica della Scuola Dianzani, Torino, 16-17 November 2018. *Oral presentation* **Boggio E**, Clemente N, Gigliotti CL, Argenziano M, Chiocchetti A, Dianzani C, Cavalli R, Dianzani U. ANTI-TUMOR EFFECT OF ICOS-Fc LOADED IN BIOCOMPATIBLE AND BIODEGRADABLE NANOPARTICLES.
- Controlled Release Society (CRS) 22-24 April 2018, New York, USA. Cavalli R, Dianzani C, Ferrara B, Clemente N, **Boggio E**, Gigliotti CL, Caldera F, Trotta F, Argenziano M, Dianzani U. ICOS in  $\beta$ -cyclodextrin nanosponges inhibits the growth of subcutaneous B16 tumors.
- XX Congresso Nazionale SIGU, Napoli, 15-18 November 2017. Zuccalà M\*, Barizzone N\*, **Boggio E\***, Gigliotti L\*, Sorosina M\*, Bordoni R, Clarelli F, Anand S, Mangano E, Vecchio D, Esposito F, Basagni C, Corsetti E, PROGEMUS, PROGRESSO, IMSGC, Predebon G, Cantello R, Martinelli V, Comi G, Leone M, De Bellis G, Dianzani U\*, Martinelli-Boneschi F\*, D'Alfonso S\*. Genomic and functional evaluation of the role of TNFSF14 gene in susceptibility to multiple sclerosis.
- ASHG Annual Meeting Orlando, 17-21 October 2017. Zuccalà M\*, Barizzone N\*, **Boggio E\***, Gigliotti L\*, Sorosina M\*, Bordoni R, Clarelli F, Anand S, Mangano E, Vecchio D, Esposito F, Basagni C, Corsetti E, PROGEMUS, PROGRESSO, IMSGC, Predebon G, Cantello R, Martinelli V, Comi G, Leone M, De Bellis G, Dianzani U\*, Martinelli-Boneschi F\*, D'Alfonso S\*. Genomic and functional evaluation of the role of TNFSF14 gene in susceptibility to multiple sclerosis.
- 38° Congresso Nazionale Società Italiana di Farmacologia (SIF)-Rimini, 25-28 October 2017. Ferrara B, Dianzani C, Bellavista E, Liepe J, Gigliotti CL, Clemente N, **Boggio E**, Comi C, Verderio C, Riganti L, Keller C, Chiocchetti A, Dianzani U, Mishto M. Effects of thrombin cleavage of osteopontin on experimental autoimmune encephalomyelitis and role of extracellular proteasome in regulating its chemotactic activity with implications in multiple sclerosis.
- Giornata IRCAD 2016 - Novara, 18 November, 2016, Poster: **Boggio E**, Gigliotti CL, Clemente N, Raineri D, Ramenghi U, Chiocchetti A, Dianzani U. Ruolo dell'interazione ICOS:ICOS-L nello sviluppo della Sindrome Autoimmune Linfoproliferativa (ALPS).
- XIX Congresso SIF, Rimini, 20-22 Settembre 2016. Ferrara B,

Cavalli R, Gigliotti CL, Clemente N, Argenziano M, **Boggio E**, Chiocchetti A, Trotta F, Giovarelli M, Pizzimenti S, Barrera G, Boldorini R, Fantozzi R, Dianzani U, Dianzani C. Improvement in the anti-tumor efficacy of doxorubicin nanosponges in in vitro and in mice bearing breast tumor models

- ASBMR 2016 Annual Meeting, Georgia, Atlanta, USA, 16-19 September 2016, Poster: D'Amelio P, Gigliotti CL, **Boggio E**, Clemente N, Chiocchetti A, Dianzani C, Bosetti M, Isaia I, Dianzani U. ICOS-Ligand Triggering Impairs Osteoclast Differentiation and Function.
- X Congresso Nazionale Società di Immunologia, Immunologia Clinica e Allergologia (SIICA) - Abano Terme, 25-28 May 2016, **Oral presentation: Boggio E**, Gigliotti CL, Clemente N, Gaidano G, Chiocchetti A, Fanin R, Dianzani U, Zaja F. Decreased function of Fas and variations of the perforin gene in adult patients with Primary Immune Thrombocytopenia.
- 10° Congresso Internazionale Autoimmunità - Lipsia, 6-10 April 2016, Poster: Gigliotti CL, **Boggio E**, Clemente N, Toth E, Chiocchetti A, Dianzani C, Bosetti M, Dianzani U. B7h triggering inhibits osteoclast function in vitro and in vivo.
- Pharmacology 2015, Queen Elizabeth II Conference Centre, Londra 15-17 December 2015. Ferrara B, Gigliotti L, Occhipinti S, **Boggio E**, Barrera G, Pizzimenti S, Giovarelli M, Fantozzi R, Chiocchetti A, Trotta F, Dianzani U, Cavalli R, Dianzani C. Effect of Camptothecin nanosponges on anaplastic thyroid cancer models.
- Premio Nazionale per l'Innovazione (PNI) – Cosenza, 2-4 December 2015, Novaicos s.r.l.s.
- XXIV Congresso Mondiale di Allergia- Seoul, Korea, 14-17 October 2015, Poster: Andiappan A, Minisini R, Röttschke O, **Boggio E**, Gigliotti CL, Clemente N, Chiocchetti A, Dianzani U, Pirisi M, Villa E. Evaluation of Serum Levels of Osteopontin As a Potential Biomarker of Immune Activation in Patients with Allergic Diseases.
- IX Congresso Nazionale Società di Immunologia, Immunologia Clinica e Allergologia (SIICA)- Firenze, 28-31 May 2014, **Oral presentation: Boggio E**, Clemente N, Mondino A, Cappellano G, Orilieri E, Gigliotti CL, Tóth E, Ramenghi U, Dianzani U, Chiocchetti A. IL-17 protects T cells from apoptosis and contributes to development of ALPS-like phenotypes.
- Giornata IRCAD 2014- Novara, 22 November 2014, **Oral presentation: Boggio E**, Gigliotti CL, Chiocchetti A, Rossi D, Gaidano G, Zaja F, Dianzani U. Caratterizzazione immunogenetica di pazienti adulti affetti da trombocitopenia immune primaria (ITP): risultati dello studio UNIT
- IX Congresso Nazionale Società di Immunologia, Immunologia Clinica e Allergologia (SIICA)- Firenze, 28-31 May 2014, Poster: Gigliotti CL, Dianzani C, Occhipinti S, Giovarelli M, Conti L, **Boggio E**, Tóth E, Baldanzi G, Chiocchetti A, Dianzani U. B7h triggering inhibits the migration of tumor cell lines .
- 15° Congresso Internazionale di Immunologia (ICI)- Milano, 22-27 August 2013, Poster: **Boggio E**, Clemente N, Ramenghi U, Dianzani U, Chiocchetti A. IL-17 protects T cells from apoptosis and contributes to development of ALPS-like phenotypes.
- 15° Congresso Internazionale di Immunologia (ICI)- Milano, 22-27 August 2013, Poster: Dianzani C, Minelli R, Gigliotti CL, Occhipinti



- S, Giovarelli M, Conti L, **Boggio E**, Shivakumar Y, Baldanzi G, Fantozzi R, Sblattero D, Chiocchetti A, Dianzani U. B7H triggering inhibits migration of tumor cell lines.
- Giornata IRCAD 2012, - Novara, 6 December 2012, *Oral presentation*: **Boggio E**, Clemente N, Ramenghi U, Dianzani U, Chiocchetti A. Ruolo di IL-17 nello sviluppo della Sindrome Autoimmune Linfoproliferativa, Premio primo classificato.
  - 3° Congresso Europeo di Immunologia (ECI)- Glasgow (UK), 5-8 September 2012, Poster: **Boggio E**, Occhipinti S, Dianzani C, Chiocchetti A, Gigliotti CL, Giovarelli M, Dianzani U. Triggering of B7h by the inducible costimulator modulates maturation and migration of monocyte-derived dendritic cells.
  - 3° Congresso Europeo di Immunologia (ECI)- Glasgow (UK), 5-8 September 2012, Poster: Gigliotti CL, Mesturini R, Soluri MF, **Boggio E**, Chiocchetti A, Dianzani U. Differential induction of IL-17, IL-10, and IL-9 in human T helper cells by B7h and B7.1.
  - 8° Congresso Internazionale Autoimmunità- Granada, 9-13 May 2012, Poster: **Boggio E**, Clemente N, Dianzani U and Chiocchetti A. IL-17 inhibits T cell apoptosis and may contribute to development of autoimmune lymphoproliferative pictures.
  - Convegno Congiunto Società di immunologia Tedesca (DGfI) e Società di Immunologia, Immunologia Clinica e Allergologia (SIICA)- Riccione, 28 September/1 October 2011, Poster: **Boggio E**, Dianzani C, Minelli R, Mesturini R, Chiocchetti A, Barrera G, Boscolo S, Sarasso C, Gigliotti GL, Sblattero D, Yagi J, Rojo JM, Fantozzi R and Dianzani U. B7h triggering inhibits umbilical vascular endothelial cell adhesiveness to tumor cell lines and polymorphonuclear cells.
  - Convegno Congiunto Società di immunologia Tedesca (DGfI) e Società di Immunologia, Immunologia Clinica e Allergologia (SIICA)- Riccione, 28 September/1 October 2011, Poster: Cappellano G, Aricò M, Cetica V, Melensi M, Orilieri E, Soluri MF, Clemente N, **Boggio E**, Chiocchetti A, Ramenghi U, Dianzani U. Variations of MUNC 13-4 gene in patients with autoimmune lymphoproliferative syndrome and defective Fas function
  - Convegno scientifico Fondazione Italiana Sclerosi Multipla (FISM)- Roma 25-26 May 2011, Poster: Soluri MF, Clemente N, Orilieri E, Cappellano G, **Boggio E**, Dianzani U Chiocchetti A. Functional mapping of osteopontin activity in EAE and MS.
  - 20° Congresso Fondazione Sclerosi Multipla (ARSEP)- Parigi, 12-13 May 2011, Poster: Gigliotti CL, Soluri MF, **Boggio E**, Orilieri E, Buttini S, Comi C, Chiocchetti A, Dianzani U. Analyses of the role of osteopontin and B7h on dendritic cell development and function in multiple sclerosis.
  - XXX Congresso Nazionale della Società Italiana di Patologia (SIP)- Salerno, 14-17 October 2010, Poster: **Boggio E**, Chiocchetti A, Dianzani U. The role of TIMP-1 in the development of autoimmunity-lymphoproliferative syndrome.
  - Convegno scientifico Fondazione Italiana Sclerosi Multipla (FISM)- Roma 26-27 May 2010, Poster: Orilieri E, Chiocchetti, **Boggio E**, Soluri MF, Dianzani U. Ruolo di anticorpi anti-osteopontina nella sclerosi multipla.
  - 7° Congresso Internazionale Autoimmunità- Ljubljana, Slovenia, 5-9 May, 2010, Poster: **Boggio E**, Chiocchetti A, Dianzani U. The role of TIMP-1 in the development of autoimmunity-lymphoproliferative

syndrome.

- 6° Congresso Nazionale Società di Immunologia, Immunologia Clinica e Allergologia (SIICA)- Roma, 11-14 June 2008, Presentazione orale: **Boggio E**, Indelicato M, Nicola S, Dianzani U, Mazzarino C, Chiocchetti A. The role of TIMP-1 in the development of autoimmunity-lymphoproliferative syndrome.
- 5° Congresso Nazionale Società di Immunologia, Immunologia Clinica e Allergologia (SIICA)- Trieste, 6-9 June 2007, Poster: Indelicato M, **Boggio E**, Nicola S, Dianzani U, Mazzarino M and Chiocchetti A. Osteopontin and TIMP-1 are involved in the development of autoimmunity-lymphoproliferation.
- European Bioalpine Convention. Inflammation and Autoimmunity: bridging public and private research-Colleretto Giacosa (TO), 6-7 November 2007, Poster: Cappellano G, Comi C, Orilieri E, Chiocchetti A, Bocca S, **Boggio E**, Seren Bernardone I, D'Alfonso S, Giordano M, Perla F, Leone M, Monaco F, and Dianzani U. Variations of the perforin gene in patients with multiple sclerosis.
- 8° Convegno Congiunto FISV- Riva del Garda, 28 September-1 October 2006, Poster: Germano S, Martelli L, **Boggio E**, Barberis D, Gaudino G. Mechanisms involved in trafficking and degradation of the Ron tyrosine kinase receptor .
- 6° Convegno Congiunto FISV, Riva del Garda, 30 September-3 October 2004, Poster: Germano S, **Boggio E**, Gaudino G. Negative regulation of the Ron tyrosine kinase receptor.

#### **PATENTS**

1. “Nuovi agenti terapeutici anti-tumorali”: 102018000001315, 18/01/2018; PCT/IB2019/050154 09.01.19 Inventori designati: Umberto DIANZANI, Casimiro Luca GIGLIOTTI, **Elena BOGGIO**, Nausicaa CLEMENTE, Annalisa CHIOCCHETTI, Francesco TROTTA, Roberta CAVALLI, Chiara DIANZANI.
2. “Ligandi del recettore B7h nel trattamento di osteopenia e osteoporosi”, 102015000018209, 27/05/2015; PCT/IB2016/052903, 18/05/2016. Umberto DIANZANI, Casimiro Luca GIGLIOTTI, **Elena BOGGIO**.

#### **SPIN-OFF**

May 2016: Chief Technical Officer (CTO) e Board member of the University Spin-off **Novaicos s.r.l.s.**

## SCIENTIFIC AWARDS

Sept 2020-Sept 2021: **PI of grant for Proof of Concept (PoC)**; Title: Ligandi del recettore B7h nel trattamento di osteopenia e osteoporosi

31 October 2018 **Abilitazione Scientifica Nazionale (ASN)** alla nomina di Professore di II Fascia, settore concorsuale 06/A2

March 2018: **premio Zonta** Area 03, Distretto 30, for General Pathology and Clinical Pathology (settore 06/A2).

November 2017: **FUTURI SVILUPPI, ITWIIN 2017 CONFERENCE & AWARDS (ASSOCIAZIONE ITALIANA DONNE INVENTRICI E INNOVATRICI)**, "An innovative approach to the problem of osteoporosis".

October 2015: **START CUP Piemonte/Valle d'Aosta 2015**, XI Edizione, Novaicos s.r.l.s, 4<sup>th</sup> classified Premio Novara.

December 2012: **Giornata IRCAD 2012**, Research on autoimmune diseases: from bench to bedside, "Role of IL-17 in the development of Autoimmune Lymphoproliferative Syndrome". Best Oral Presentation.

## ABSTRACT IN JOURNALS

1. Andiappan A, Minisini R, Röttschke O, **Boggio E**, Gigliotti CL, Clemente N, Chiocchetti A, Dianzani U, Pirisi M, Villa E. Evaluation of Serum Levels of Osteopontin As a Potential Biomarker of Immune Activation in Patients with Allergic Diseases. *THE WORLD ALLERGY ORGANIZATION JOURNAL*, 2016, 9 (Suppl. 1), A375.

2. Dianzani C, Minelli R, Gigliotti CL, Occhipinti S, Giovarelli M, Conti L, **Boggio E**, Shivakumar Y, Baldanzi G, Malacarne V, Orilieri E, Cappellano G, Fantozzi R, Sblattero D, Yagi J, Rojo JM, Chiocchetti A, Dianzani U. B7h triggering inhibits the migration of tumor cell lines. *Global Medical Discovery*, October 24, 2014.

3. Zaia F, **Boggio E**, Rossi D, Toffoletti E, Cappellano G, Orilieri E, Puglisi S, Lunghi M, Vianelli N, Cantoni S, Tieghi A, Beggato E, Gaidano G, Fanin R, Dianzani U. Immunogenetic Characterization of Primary Immune Thrombocytopenia (ITP) in Adults: Preliminary Results of the Unit Study. *BLOOD*, 2012, 120:(21), 2192.

4. Comi C, Briani C, Cocito D, Osio M, **Boggio E**, Orilieri E, Chiocchetti A, Dianzani U. The role of osteopontin/anti-osteopontin antibodies in CIDP. *JOURNAL OF THE PERIPHERAL NERVOUS SYSTEM*. 2011, 16-10.

5. Comi C, **Boggio E**, Carecchio M, Galimberti D, Chiocchetti A, Buttini S, Scarpini E, Monaco F, Dianzani U. Cerebrospinal fluid levels of tissue inhibitor of metalloproteinase 1 are increased in subjects with mild cognitive impairment. *JOURNAL OF ALZHEIMER'S DISEASE*, 2011.

## **OTHER ACTIVITIES**

August 2020-to date: Topic Editor for Pharmaceuticals

April 2020-Sept 2020: Support and Integrative Activities for Teaching for the A.Y. 2019/2020- Degree course in Biotechnology: "Cytofluorimetry and immunology techniques 1".

April 2019-June 2019: Support and Integrative Activities for Teaching for the A.Y. 2018/2019- Degree course in Biotechnology: "Cytofluorimetry and immunology techniques 1".

April 2018-June 2018: Support and Integrative Activities for Teaching for the A.Y. 2017/2018- Degree course in Biotechnology: "Cytofluorimetry and immunology techniques 1".

March 2018-to date: IRCAD member.

August 2017-to date: Reviewer for the following scientific journals: Drug Design, Development and Therapy; ImmunoTargets and Therapy; International Journal of Nanomedicine; Scientific Reports; Cancers.

November 2014-to date: Member of the editorial team of Case Reports in Clinical Pathology.

March 2017-September 2017: Support and Integrative Activities for Teaching for the A.Y. 2016/2017- Degree course in Biotechnology: "Cytofluorimetry and immunology techniques 1".