

ALESSANDRO TONACCI – CURRICULUM VITAE

Name, Surname: Alessandro Tonacci

Place and Date of birth:

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Nationality:

Bioengineering graduate and Engineering research doctor with an experience in olfactory and sensory evaluation, electronic nose-like systems, wearable sensors and physiological signal processing. Good written and spoken English, French and German.

WORK EXPERIENCE

Researcher (Permanent, Full-Time Position) at the Clinical Physiology Institute of the National Research Council of Italy (IFC-CNR, Pisa)

July 2020 - ongoing

Olfactory assessment, sensory evaluation, electronic nose for biomedical and environmental applications, wearable sensors, physiological signal processing. Project management, ICT systems, informative system infrastructures.

Researcher (Fixed-Term Position) at the Clinical Physiology Institute of the National Research Council of Italy (IFC-CNR, Pisa) under the supervision of Dr. Raffaele Conte

January-July 2020

Olfactory assessment, sensory evaluation, electronic nose for biomedical and environmental applications, wearable sensors, physiological signal processing. Project management, ICT systems, informative system infrastructures.

Research Fellowship at the Clinical Physiology Institute of the National Research Council of Italy (IFC-CNR, Pisa) under the supervision of Dr. Raffaele Conte (April 2016-April 2018, December 2018-Ongoing), Dr. Maurizio Varanini (May 2018-November 2018), Prof. Claudio Domenici (April 2015-March 2016) and Dr. Giovanni Pioggia (December 2011-March 2015)

December 2011-December 2019

Olfactory assessment, sensory evaluation, electronic nose for biomedical and environmental applications, wearable sensors, physiological signal processing. Project management, ICT systems, informative system infrastructures.

Teaching assistance - Bachelor Degree in Biomedical Engineering, Department of Information Engineering, University of Pisa - Teaching course "Sensorial systems", Module "Biosensors" (Prof. Piero Chiarelli). Year 2014/2015.

October-December 2014

Biosensors: ISFET, ENFET, MOSFET technology, immunosensors.

Teaching assistance - Bachelor Degree in Biomedical Engineering, Faculty of Engineering, University of Pisa - Teaching course "Sensorial systems", Module "Biosensors" (Prof. Piero Chiarelli). Year 2013/2014.

October-December 2013

Biosensors: ISFET, ENFET, MOSFET technology, DNA sensors.

Teaching assistance – Bachelor Degree in Biomedical Engineering, Faculty of Engineering, University of Pisa – Teaching course "Sanitary technology", Module "Bioinstrumentation" (Prof. Claudio Domenici). Year 2012/2013.

April-June 2013

Bioinstrumentation: Magnetic Resonance, Near-Infrared Spectroscopy, Electronic Nose systems.

Stage at the Clinical Physiology Institute of the National Research Council of Italy (IFC-CNR, Pisa) under the supervision of Dr. Giovanni Pioggia

January-November 2011

Olfactory evaluation for neurodegeneration assessment, characterization of sensors for volatile compounds detection.

Stage at the Microbiology Department of the University Hospital “Cisanello” of Pisa under the supervision of Prof. Mario Campa

August 2008-February 2009

Use of Real-Time PCR for the identification of bacteria in biological cultures, employment of the common instrumentation of a microbiology unit (E-test, antibiogram, etc.).

EDUCATION AND TRAINING

Second Level Master Degree in “Machine learning and big data in precision medicine and biomedical research”, Department of Cardio-Thoracic-Vascular Science and Department of Information Engineering, University of Padua, Italy

Big Data, Bioengineering, Public Health Sector

2020-2021

Project title: Machine learning models for the prediction of respiratory function in the English population aged 50 years and over

Advisor: Dr. Martina Vettoretti

PhD - Doctoral School of Engineering “Leonardo Da Vinci”, Programme in Automation, Robotics and Bioengineering - Department of Electrical Systems and Automation - University of Pisa, Italy

Bioengineering Sector

2012-2015

Project title: Natural and artificial sense of smell for biomedical and environmental applications

Advisor: Dr. Giovanni Pioggia

Co-advisor: Prof. Claudio Domenici

Master Degree in Biomedical Engineering (108/110) - University of Pisa, Italy

Biomedical Technology Sector

December 2010

Thesis title: Innovative biomedical methods of olfactometry analysis for the evaluation of neurodegenerative damage

Advisor: Dr. Giovanni Ploggia

Co-advisor: Dr. Eugenio Picano

Bachelor's degree in Biomedical Engineering (89/110) - University of Pisa, Italy

Industrial Engineering Sector

February 2009

Thesis title: Real Time PCR for rapid identification of Methicillin-resistant Staphylococcus aureus in clinical samples

Advisor: Prof. Mario Campa

Co-advisor: Dr. Simona Barnini

High school leaving qualification in scientific studies. Liceo scientifico "Enrico Fermi" - Massa (MS), Italy

June 2004

PERSONAL COMPETENCES

Technical Competences

Competences in the field of olfactory assessment and neurodegeneration. Computer use (Windows OS, MS Office, Origin, Matlab, SPSS). Employment of olfactory evaluation kits (STT, UPSIT, Sniffin' Sticks, OLFACT-RL, OLFACT-OD, OLFACT-ID). Employment of wearable biomedical sensors for ECG, EMG, Skin Conductance (Shimmer Research sensors), EMG (BTS Bioengineering). Employment of laboratory consumables (spin dryer, vortex, pipette, etc.). Characterization of sensors for the detection of Volatile Compounds, with particular reference on piD sensors.

Organizational Competences

Competences in orders of laboratory material and in the organization of team work within local, National and European research projects.

Knowledge of national (Italian) and European policies and systems achieved during the presentation of projects within the EU-FP7, EU-H2020, Interreg, IPA CBC programs.

Eight-year experience of motivating, supporting and communicating with a multidisciplinary team (bioengineers, computer scientists, chemists, psychologists, doctors, physicists), technical staff and young students mainly, but not only, having a Biomedical Engineering background.

Good analytical and problem solving attitude, improved during the PhD and research fellowship experience at IFC-CNR.

Good teaching and research activity, good organizational skills referring to the projects developed in last five years at IFC-CNR, and strengthened in the last period, in which the research lab was reorganized; good success confirmed by the increase of scientific publications during the last year.

Good attitude to plan research and teaching activities, to work in parallel to a vast amount of research projects and teaching activities.

Good organizational skills concerning the preparation of teaching programs, lessons, talks, and exams.

Good future view, with organizational skills foreseeing the future implications of the decision taken.

Excellent ability to work independently, even in a new environment, as demonstrated by the publications as a first author mentioned in this document.

Good attitude and motivation in project management, writing of deliverables and technical reports, and respect of the planned deadlines.

Language Competences

Good written and spoken English. 7th Level Trinity College Certificate for English language.

Good written and spoken French. B1 Level French language certificate "DELFI".

Good written and spoken German.

ADDITIONAL INFORMATION

h-Index (SCOPUS): 16

Papers:

Tonacci A*, Borghini A*, Mercuri A, Pioggia G, Andreassi MG. Brain-derived neurotrophic factor (Val66Met) polymorphism and olfactory ability in young adults. *Journal of Biomedical Science* 2013; 20: 57. doi: 10.1186/1423-0127-20-57.

Tonacci A, Baldus G, Corda D, Piccaluga E, Andreassi MG, Cremonesi A, Guagliumi G, Picano E. Olfactory non-cancer effects of exposure to ionizing radiation in staff working in the cardiac catheterization laboratory. *International Journal of Cardiology* 2014; 171: 461-463. doi: 10.1016/j.ijcard.2013.12.223.

Pioggia G*, Tonacci A*, Tartarisco G, Billeci L, Muratori F, Ruta L, Gangemi S*. Autism and lack of D3 vitamin: a systematic review. *Research in Autism Spectrum Disorders* 2014; 8: 1685-1698. doi: 10.1016/j.rasd.2014.09.003.

Tonacci A, Corda D, Tartarisco G, Pioggia G, Domenici C. A smart sensor system for detecting hydrocarbon Volatile Organic Compounds in sea water. *CLEAN - Soil, Air, Water* 2015; 43(1): 147-152. doi: 10.1002/clen.201300894.

Tonacci A, Chilosi AM, Pioggia G, Morales MA, Cioni G. Effect of Olfactory Stimulation in Agenesis of the Corpus Callosum: A Case Report. *Brain Impairment* 2015; 15(3): 216-222. doi: 10.1017/BrImp.2014.23.

Tartarisco G, Carbonaro N, Tonacci A, Bernava GM, Arnao A, Crifaci G, Cipresso P, Riva G, Gaggioli A, De Rossi D, Tognetti A, Pioggia G. Neuro-Fuzzy Physiological Computing to Assess Stress Levels in Virtual Reality Therapy. *Interacting with Computers* 2015; 27(5): 521-533. doi: 10.1093/iwc/iwv010.

Borghini A, Giardini G, Tonacci A, Mastorci F, Mercuri A, Mrakic Sposta S, Moretti S, Andreassi MG, Pratali L. Chronic and acute effects of endurance training on telomere length. *Mutagenesis* 2015; 30(5):711-716. doi: 10.1093/mutage/gev038.

Billeci L, Tonacci A, Tartarisco G, Ruta L, Pioggia G, Gangemi S. Association Between Atopic Dermatitis and Autism Spectrum Disorders: A Systematic Review. *American Journal of Clinical Dermatology* 2015; 16(5):371-388. doi: 10.1007/s40257-015-0145-5.

Tonacci A, Billeci L, Tartarisco G, Ruta L, Muratori F, Pioggia G, Gangemi S. Olfaction in autism spectrum disorders: A systematic review. *Child Neuropsychology* 2017; 23(1): 1-25. doi: 10.1080/09297049.2015.1081678.

Tonacci A, Lacava G, Lipa MA, Lupi L, Cocco M, Domenici C. Electronic Nose and AUV: A Novel Perspective in Marine Pollution Monitoring. *Marine Technology Society Journal* 2015; 49(5): 18-24(7). doi: 10.4031/MTSJ.49.5.4.

Mrakic-Sposta S, Gussoni M, Moretti S, Pratali L, Giardini G, Tacchini P, Dellanoce C, Tonacci A, Mastorci F, Borghini A, Montorsi M, Vezzoli A. Effects of Mountain Ultra-Marathon Running on ROS Production and Oxidative Damage by Micro-Invasive Analytic Techniques. *PLoS One* 2015; 10(11): e0141780. doi: 10.1371/journal.pone.0141780.

Pennisi P, Tonacci A, Tartarisco G, Billeci L, Ruta L, Gangemi S, Pioggia G. Autism and social robotics: A systematic review. *Autism Research* 2016; 9(2): 165-183. doi: 10.1002/aur.1527.

Billeci L, Tonacci A, Tartarisco G, Ruta L, Pioggia G, Gangemi S. Reply to Fluegge: Association Between Atopic Dermatitis and Autism Spectrum Disorders: A Systematic Review. *American Journal of Clinical Dermatology* 2016; 17(2): 189-190. doi: 10.1007/s40257-016-0181-9.

Tonacci A, Billeci L, Tartarisco G, Mastorci F, Borghini A, Mrakic-Sposta S, Moretti S, Vezzoli A, Faraguna U, Pioggia G, Giardini G, Pratali L. A novel application for cognitive evaluation in mountain ultramarathons: olfactory assessment. *Wilderness & Environmental Medicine* 2016; 27(1): 131-135. doi: 10.1016/j.wem.2015.11.013.

Di Palma S, Tonacci A, Narzisi A, Domenici C, Pioggia G, Muratori F, Billeci L, The MICHELANGELO Study Group. Monitoring of autonomic response to sociocognitive tasks during treatment in children with autism

spectrum disorders by wearable technologies: A feasibility study. *Computers in Biology and Medicine* 2017; 85: 143-152. doi: 10.1016/j.combiomed.2016.04.001.

Billeci L, Tonacci A, Tartarisco G, Narzisi A, Di Palma S, Corda D, Baldus G, Cruciani F, Anzalone SM, Calderoni S, Pioggia G, Muratori F, The MICHELANGELO Study Group. An Integrated Approach for the Monitoring of Brain and Autonomic Response of Children with Autism Spectrum Disorders during Treatment by Wearable Technologies. *Frontiers in Neuroscience* 2016; 10: 276. doi: 10.3389/fnins.2016.00276.

Tonacci A, Billeci L, Ruta L, Tartarisco G, Pioggia G, Gangemi S. A systematic review of the association between allergic asthma and autism. *Minerva Pediatrica* 2017; 69(6): 538-550. doi: 10.23736/S0026-4946.16.04623-5.

Moroni D, Pieri G, Salvetti O, Tampucci M, Domenici C, Tonacci A. Sensorized Buoy for Oil Spill Early Detection. *Methods in Oceanography* 2016; 17: 221-231 doi: 10.1016/j.mio.2016.10.002.

Maffei L, Picano E, [...], Tonacci A, Tosetti M, Turchi S, Volpi L. Randomized trial on the effects of a combined physical/cognitive training in aged MCI subjects: the Train the Brain study. *Scientific Reports* 2017; 7: 39471. doi: 10.1038/srep39471.

Tonacci A, Billeci L, Pioggia G, Navarra M, Gangemi S. Omalizumab for the Treatment of Chronic Idiopathic Urticaria: Systematic Review of the Literature. *Pharmacotherapy* 2017; 37(4):464-480. doi: 10.1002/phar.1915.

Tonacci A, Mrakic-Sposta S, Ujka K, Sansone F, Ferrisi A, Giardini G, Conte R, Pratali L. Neurosensory and cognitive modifications in Europe's toughest RandoRaid competition: the Transpyrénéa Extreme Study. *Frontiers in Physiology* 2017; 8: 201. doi: 10.3389/fphys.2017.00201. eCollection 2017.

Tonacci A*, Bruno RM*, Ghiadoni L, Pratali L, Berardi N, Tognoni G, Cintoli S, Volpi L, Bonuccelli U, Sicari R, Taddei S, Maffei L, Picano E. Olfactory evaluation in Mild Cognitive Impairment: correlation with neurocognitive performance and endothelial function. *European Journal of Neuroscience* 2017; 45(10):1279-1288. doi: 10.1111/ejn.13565.

Tartarisco G, Tonacci A, Minciullo PL, Billeci L, Pioggia G, Incorvaia C, Gangemi S. The soft computing-based approach to investigate allergic diseases: a systematic review. *Clinical and Molecular Allergy* 2017; 15: 10. doi: 10.1186/s12948-017-0066-3.

Vinci B, Tonacci A, Caudai C, De Rosa P, Nencini L, Pratali L. The SENSEable Pisa Project: Citizen-Participation in Monitoring Acoustic Climate of Mediterranean City Centres. *CLEAN - Soil, Air, Water* 2017; 45(7): 1600137. doi: 10.1002/clen.201600137.

Muratori F*, Tonacci A*, Billeci L, Catalucci T, Iglizzi R, Calderoni S, Narzisi A. Olfactory processing in male children with autism: atypical odor threshold and Identification. *Journal of Autism and Developmental Disorders* 2017; 47(10): 3243-3251. doi: 10.1007/s10803-017-3250-x. Erratum in: *J Autism Dev Disord.* 2017;47(10):3252. doi: 10.1007/s10803-017-3291-1.

Ujka K, Bastiani L, D'Angelo G, Catuzzo B, Tonacci A, Mrakic-Spota S, Vezzoli A, Giardini G, Pratali L. Enhanced right chambers remodeling in endurance ultra-trail athletes compared to marathon runners detected by standard and speckle-tracking echocardiography. *Frontiers in Physiology* 2017; 8: 527. doi: 10.3389/fphys.2017.00527.

Billeci L, Narzisi A, Tonacci A, Sbriscia-Fioretti B, Serasini L, Fulceri F, Apicella F, Sicca F, Calderoni S, Muratori F. An integrated EEG and eye-tracking approach for the study of responding and initiating joint attention in Autism Spectrum Disorders. *Scientific Reports* 2017; 7(1): 13560. doi: 10.1038/s41598-017-13053-4.

Pifferi M, Bush A, Rizzo M, Tonacci A, Di Cicco M, Piras M, Maggi F, Paiola G, Michelucci A, Cangiotti A, Peroni D, Caramella D, Boner AL. Olfactory dysfunction is worse in primary ciliary dyskinesia compared with other causes of chronic sinusitis in children. *Thorax* 2018; 73(10):980-982. doi: 10.1136/thoraxjnl-2017-210661.

Billeci L, Tonacci A, Narzisi A, Manigrasso Z, Varanini M, Fulceri F, Lattarulo C, Calderoni S, Muratori F. Heart Rate Variability during a joint attention task in toddlers with Autism Spectrum Disorders. *Frontiers in Physiology* 2018; 9: 467. doi: 10.3389/fphys.2018.00467.

Tonacci A, Billeci L. Olfactory Testing in Frontotemporal Dementia: A Literature Review. *American Journal of Alzheimer's Disease & Other Dementias* 2018; 33(6):342-352. doi: 10.1177/1533317518775037.

Tonacci A, Sansone F, Pala AP, Conte R. Exhaled breath analysis in evaluation of psychological stress: A short literature review. *International Journal of Psychology* 2019; 54(5):589-597. doi: 10.1002/ijop.12494.

Fulceri F, Tonacci A, Lucaferro A, Apicella F, Narzisi A, Vincenti G, Muratori F, Contaldo A. Interpersonal motor coordination during joint actions in children with and without autism spectrum disorder: The role of motor information. *Research in Developmental Disabilities* 2018; 80: 13–23. doi: 10.1016/j.ridd.2018.05.018.

Tonacci A, Sansone F, Conte R, Domenici C. Use of Electronic Noses in Seawater Quality Monitoring: A Systematic Review. *Biosensors* 2018; 8(4): 115. doi: 10.3390/bios8040115.

Cannavò SP, Tonacci A, Bertino L, Casciaro M, Borgia F, Gangemi S. The role of oxidative stress in the biology of melanoma: a systematic review. *Pathology - Research and Practice* 2019; 215(1):21-28. doi: 10.1016/j.prp.2018.11.020.

Tonacci A, Bagnato G, Pandolfo G, Billeci L, Sansone F, Conte R, Gangemi S. MicroRNA cross-involvement in Autism Spectrum Disorders and Atopic Dermatitis: a literature review. *Journal of Clinical Medicine* 2019; 8: 88. doi:10.3390/jcm8010088.

Tonacci A, Billeci L, Sansone F, Masci A, Pala AP, Domenici C, Conte R. An Innovative, Unobtrusive Approach to Investigate Smartphone Interaction in Nonaddicted Subjects Based on Wearable Sensors: A Pilot Study. *Medicina* 2019; 55: 37. doi: 10.3390/medicina55020037.

Tonacci A, Quattrocchi P, Gangemi S. IL33/ST2 Axis in Diabetic Kidney Disease: A Literature Review. *Medicina* 2019; 55: 50. doi:10.3390/medicina55020050.

Tonacci A, Calderoni S, Billeci L, Maestro S, Fantozzi P, Ciuccoli F, Morales MA, Narzisi A, Muratori F. Autistic traits impact on olfactory processing in adolescent girls with Anorexia Nervosa restricting type. *Psychiatry Research* 2019; 274: 20-26. doi: 10.1016/j.psychres.2019.02.026.

Billeci L, Tonacci A, Brunori E, Raso R, Calderoni S, Maestro S, Morales MA. Autonomic Nervous System Response during Light Physical Activity in Adolescents with Anorexia Nervosa Measured by Wearable Devices. *Sensors* 2019; 19(12): 2820. doi: 10.3390/s19122820.

Tonacci A, Billeci L, Calderoni S, Levantini V, Masi G, Milone A, Pisano S, Muratori P. Sympathetic Arousal in Children with Oppositional Defiant Disorder and Its Relation to Emotional Dysregulation. *Journal of Affective Disorders* 2019; 257:207-213. doi: 10.1016/j.jad.2019.07.046.

Murdaca G, Tonacci A, Negrini S, Greco M, Borro M, Puppo F, Gangemi S. Emerging role of vitamin D in autoimmune diseases: An update on evidence and therapeutic implications. *Autoimmunity Reviews* 2019; 18(9):102350. doi: 10.1016/j.autrev.2019.102350.

Cintoli S, Radicchi C, Noale M, Maggi S, Meucci G, Tognoni G, [...], Tonacci A, Tosetti M, Turchi S, Volpi L, Train the Brain Consortium. Effects of combined training on neuropsychiatric symptoms and quality of life in patients with cognitive decline. *Aging Clinical and Experimental Research* 2019. doi: 10.1007/s40520-019-01280-w.

Murdaca G, Tonacci A, Negrini S, Greco M, Borro M, Puppo F, Gangemi S. Effects of AntagomiRs on Different Lung Diseases in Human, Cellular, and Animal Models. *International Journal of Molecular Sciences* 2019; 20: 3938. doi:10.3390/ijms20163938.

Verratti V, Mrakic-Sposta S, Moriggi M, Tonacci A, Bhandari S, Migliorelli D, Bajracharya A, Bondi D, Agrò EF, Cerretelli P. Urinary physiology and hypoxia: a pilot study of moderate-altitude trekking effects on urodynamic indices. *American Journal of Physiology-Renal Physiology* 2019. doi: 10.1152/ajprenal.00333.2019.

Tonacci A, Billeci L, Burrai E, Sansone F, Conte R. Comparative Evaluation of the Autonomic Response to Cognitive and Sensory Stimulations through Wearable Sensors. *Sensors* 2019; 19(21): 4661. doi: 10.3390/s19214661.

Cecchetti L, Lettieri G, Handjaras G, [...], Tonacci A, Tosetti M, Turchi S, Volpi L. Brain hemodynamic intermediate phenotype links Vitamin B12 to cognitive profile of healthy and mild cognitive impaired subjects. *Neural Plasticity* 2019; 2019: 6874805. doi: 10.1155/2019/6874805.

Murdaca G, Greco M, Tonacci A, Negrini S, Borro M, Puppo F, Gangemi S. "IL-33/IL-31 axis" in immune-mediated and allergic diseases. *International Journal of Molecular Sciences* 2019; 20: 5856. doi: 10.3390/ijms20235856.

Tonacci A, Di Monte J, Meucci MB, Sansone F, Pala AP, Billeci L, Conte R. Wearable Sensors to Characterize the Autonomic Nervous System Correlates of Food-Like Odors Perception: A Pilot Study. *Electronics* 2019; 8(12): 1481. doi: 10.3390/electronics8121481

Laurino M, Alfi G, Billeci L, Bortone I, Buzzigoli E, Cecchi A, Del Ry S, Gastaldelli A, Lai E, Morales MA, Pagni C, Passino C, Severino S, Tonacci A, Gemignani A, Trivella MG. Healthy aging: the INTECMAN project. *Aging Clinical and Experimental Research* 2020. doi: 10.1007/s40520-019-01444-8

Allegra A, Musolino C, Tonacci A, Pioggia G, Casciaro M, Gangemi S. Clinico-Biological Implications of Modified Levels of Cytokines in Chronic Lymphocytic Leukemia: A Possible Therapeutic Role. *Cancers* 2020; 12: 524. doi: 10.3390/cancers12020524

Tonacci A, Nettis E, Asero R, Rossi O, Tontini C, Gangemi S. Omalizumab retreatment in patients with chronic spontaneous urticaria: a systematic review of published evidence. *European Annals of Allergy and Clinical Immunology* 2020. doi: 10.23822/EurAnnACI.1764-1489.136

Allegra A, Musolino C, Tonacci A, Pioggia G, Gangemi S. Interactions between the MicroRNAs and Microbiota in Cancer Development: Roles and Therapeutic Opportunities. *Cancers* 2020; 12: 805. doi: 10.3390/cancers12040805

Tonacci A, Dellabate A, Dieni A, Bachi L, Sansone F, Conte R, Billeci L. Can Machine Learning Predict Stress Reduction Based on Wearable Sensors' Data Following Relaxation at Workplace? A Pilot Study. *Processes* 2020; 8: 448; doi: 10.3390/pr8040448

Allegra A, Pioggia G, Tonacci A, Musolino C, Gangemi S. Oxidative stress and photodynamic therapy of skin cancers: mechanisms, challenges and promising developments. *Antioxidants* 2020; 9: 448. doi: 10.3390/antiox9050448

Levantini V, Muratori P, Inguaggiato E, Masi G, Milone A, Valente E, Tonacci A, Billeci L. EYES Are The Window to the Mind: Eye-Tracking Technology as a Novel Approach to Study Clinical Characteristics of ADHD. *Psychiatry Research* 2020; 290: 113135. doi: 10.1016/j.psychres.2020.113135.

Allegra A, Tonacci A, Pioggia G, Musolino C, Gangemi S. Anticancer Activity of *Rosmarinus officinalis*: mechanisms of action and therapeutic potentials. *Nutrients* 2020; 12: 1739. doi: 10.3390/nu12061739.

Allegra A, Pioggia G, Tonacci A, Musolino C, Gangemi S. Cancer and SARS-CoV-2 Infection: Diagnostic and Therapeutic Challenges. *Cancers* 2020; 12: 1581. doi: 10.3390/cancers12061581. (IF=6.162)

Billeci L, Caterino E, Tonacci A, Gava ML. Behavioral and Autonomic Responses in Treating Children with High-Functioning Autism Spectrum Disorder: Clinical and Phenomenological Insights from Two Case Reports. *Brain Sciences* 2020; 10: 382. doi: 10.3390/brainsci10060382.

Allegra A, Di Gioacchino M, Tonacci A, Musolino C, Gangemi S. Immunopathology of SARS-CoV-2 infection: immune cells and mediators, prognostic factors, and immune-therapeutic implications. *International Journal of Molecular Sciences* 2020.

Narzisi A, Bondioli M, Pardossi F, Billeci L, Buzzi MC, Buzzi M, Pinzino M, Senette C, Semucci V, Tonacci A, Uscidda F, Vagelli B, Giuca MR, Pelagatti S. Mom let's go to the dentist ! An Italian experience of dental care for children with Autism Spectrum Disorder in a public health service? *Brain Sciences* 2020.

Baldini C, Billeci L, Sansone F, Conte R, Domenici C, Tonacci A. Electronic Nose as a Novel Method for Diagnosing Cancer: A Systematic Review. *Biosensors* 2020; 10: 84. doi: 10.3390/bios10080084.

Billeci L, Badolato A, Bachi L, Tonacci A. Machine Learning for the Classification of Alzheimer's Disease and Its Prodromal Stage Using Brain Diffusion Tensor Imaging Data: A Systematic Review. *Processes* 2020; 8: 1071. doi:10.3390/pr8091071.

Patella V, Florio G, Palmieri M, Bousquet J, Tonacci A, Giuliano A, Gangemi S. Atopic Dermatitis Severity during Exposure to Air Pollutants and Weather Changes with an artificial neural network (ANN) analysis. *Pediatric Allergy and Immunology* 2020. doi:10.1111/pai.13314.

Gangemi S, Tonacci A. AntagomiRs: A novel therapeutic strategy for challenging COVID-19 cytokine storm. *Cytokine and Growth Factor Reviews* 2020. Doi: 10.1016/j.cytogfr.2020.09.001

Gangemi S, Billeci L, Tonacci A. Rich at risk: Socio-economic drivers of COVID-19 pandemic spread. *Clinical and Molecular Allergy* 2020; 18(1): 12. doi: 10.1186/s12948-020-00127-4

Allegra A, Pioggia G, Tonacci A, Casciaro M, Musolino C, Gangemi S. Synergic Crosstalk between Inflammation, Oxidative Stress, and Genomic Alterations in BCR–ABL-Negative Myeloproliferative Neoplasm. *Antioxidants* 2020; 9: 1037. doi: 10.3390/antiox9111037

De Martinis M, Ginaldi L, Allegra A, Sirufo MM, Pioggia G, Tonacci A, Gangemi S. The Osteoporosis/Microbiota linkage: the role of miRNA. *International Journal of Molecular Sciences* 2020; 21: 8887. doi: 10.3390/ijms21238887

Allegra A, Tonacci A, Spagnolo EV, Musolino C, Gangemi S. Antiproliferative Effects of St. John's Wort, Its Derivatives, and Other Hypericum Species in Hematologic Malignancies. *International Journal of Molecular Sciences* 2021; 22: 146. doi: 10.3390/ijms22010146

Tonacci A, Billeci L, Di Mambro I, Marangoni R, Sanmartin C, Venturi F. Wearable Sensors for Assessing the Role of Olfactory Training on the Autonomic Response to Olfactory Stimulation. *Sensors* 2021; 21: 770. doi: 10.3390/s21030770

Extended Abstracts:

Tonacci A, Corda D, Tartarisco G, Pioggia G, Domenici C. A smart system to detect Volatile Organic Compounds produced by hydrocarbons on seawater. *Sensors and Microsystems Lecture Notes in Electrical Engineering* 2014;268:99-102. doi: 10.1007/978-3-319-00684-0_19.

Trivella MG, Tonacci A, Billeci L, Gemignani V, Gastaldelli A, Gemignani A. Neurophysiological and Behavioural Variables in Cognitive Impairment: Towards a Personalised Monitoring System. Springer

International Publishing Switzerland 2015, ISBN 978-3-319-18374-9, 2015. B. Andò et al. (eds.), Ambient Assisted Living, Biosystems & Biorobotics, pp 407-417. DOI 10.1007/978-3-319-18374-9_38

Tonacci A, Lacava G, Lipa MA, Lupi L, Pioggia G, Gualdesi L, Domenici C, Cocco M. A smart multimodal innovative model for marine environmental monitoring. Proceedings - 29th European Conference on Modelling and Simulation, ECMS 2015: 455-461

Tonacci A, Sansone F, Pala AP, Centrone A, Napoli F, Domenici C, Conte R. Effect of feeding on neurovegetative response to olfactory stimuli. 6th IEEE International Conference on e-Health and Bioengineering, Sinaia, Romania, 2017.

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Member of the Editorial Board for the following journals:

Frontiers in Human Neuroscience (Review Editor)

Frontiers in Neuroscience – Autonomic Neuroscience (Review Editor)

Frontiers in Physiology – Integrative Physiology (Review Editor)

Processes (Guest Editor + Topic Editor + Section Board Member)

International Journal of Environmental Research and Public Health (Topic Editor + Guest Editor)

Activities as a Peer-Reviewer for the following journals:

Computers in Biology and Medicine

Frontiers in Education

Frontiers in Physiology

Frontiers in Psychology

Frontiers in Public Health

High Altitude Medicine & Biology

Pediatrics

Physiology & Behavior

Activities as a project Peer-Reviewer for the following institutions:

National Centre of Science and Technology evaluation, Ministry of Education and Science, Republic of Kazakhstan (2017, 2018, 2019, 2020)

Israeli Ministry of Science, Technology and Space (2019)

Activities as a conference Referee/TPC Member for the following events:

IEEE ICCE Berlin 2018 (TPC Member + Chair for two sessions: "Gaming", "Poster Session 2")

IEEE ICCE Berlin 2019 (TPC Member)

IEEE ISCT 2019 Ancona (TPC Member + Session Chair "Consumer Healthcare 3")

IEEE ZINC 2020 Novi Sad (TPC Member)

IEEE ICCE Berlin 2020 (TPC Member)

IEEE ZINC 2021 Novi Sad (TPC Member + Panel Session Chair "Success stories from consumer technology – helping and saving lives")

WS06 ICC'21 Workshop – AffectiveSense (TPC Member)

PhD Courses Attended:

"Introduction to Neural Networks" (Prof. Buttazzo, Scuola Superiore S.Anna, Pisa).

"Probability and Statistics" (Prof. Flandoli, Information Engineering Department, University of Pisa).

"Complex Dynamics Systems" (Prof. Fronzoni, Faculty of Engineering, University of Pisa).

"Biosensors and Bioinstrumentation" (Prof. Domenici, Faculty of Engineering, University of Pisa).

"English for Writing and Presenting Scientific Papers" – Part I + Part II (Prof. Wallwork, Information Engineering Department, University of Pisa).

Summer School “Ocean Technologies 2014” (University of Algarve, Faro, Portugal).

REFERENCES

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