

PERSONAL INFORMATION

## **Roberto Eggenhöffner**



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ORCID ID: 0000-0001-7886-1829

Sex M | Date of birth 06/04/1952 | Nationality Italian

**DEGREE Doctor in Chemistry – cum laude – February 1977**

WORK EXPERIENCE

Associate professor of Applied Physics since 2001 – “Conferma in ruolo” in 2005

- “Ricercatore Universitario” since November 1980 – “conferma in ruolo” in 1984 for the Physics of Matter
- CNR Fellowship in Theoretical Physics -June 1977-October1980

Current activities

Participant to the “Current Research 2020-2023”- Project title: Biosensori e tecniche biomolecolari per un approccio innovativo nella diagnostica delle malattie parassitarie e virali delle api.

Chair of the International Meeting TRACE-2 “Tissue Regeneration: Advanced Ceramics and Composites” held in Villa Vigoni Menaggio Como’s lake April 4-5, 2019

Participant to the “Current Research 2018”- Project title: “Development of a diagnostic protocol to verify the correlation between the use of permitted pesticides in viticulture and the health of bees through the use of a new biomarker”.

Participant to the CRT Project, title: “Contrast to the death of bees in Piedmont: determination of a new efficient biomarker to evaluate the health and productivity of apiaries”.

Chair of the International Meeting TRACE “Tissue Regeneration: Advanced Ceramics and Composites” held in Genova October 19-20, 2017.

Participant to ERANET-Horizon 2020 Project: BRACTICE “New Indicators And On-Farm Practices To Improve Honeybee Health In The Aethina Tumida Era In Europe”.

Participant to the project sponsored by Zuccato Energia, with base in Verona. Project Title: “Wiring microorganisms:affecting the genetic fate of facultative photosynthetic bacteria by direct electrochemistry.”

Participant to the “Current Research 2015”- Project title: “Stem cells: new tools for clinical applications” financed by the Ministry of Health and to the “Current Research 2017”- Project title: “Innovative Technologies in Regenerative medicine: Stem Cells and Scaffolds in Veterinary Orthopedy” financed by the Ministry of Health. The research is in collaboration with the Istituto Zooprofilattico del Lazio e della Toscana (IZSLT) with headquarters in Rome.

FROM 2009 TO PRESENT

Physicist  
Dipartimento di Scienze Chirurgiche e Diagnostiche Integrate (DISC) Università di Genova

Corso Europa 30 16132 GENOVA  
Head of the Research Group in Medical Biophysics of DISC  
Laboratory management in biophysics  
Biosensors –Nanogravimetry –Cyclic Voltammetry  
Nanoparticles applications in polymers–Solid state and sol-gel in tissue regeneration –  
Drug management and delivery.

FROM 1996 TO 2009

Physicist  
Dipartimento di Fisica  
Via Dodecaneso 33 16146 GENOVA

Head of Research Projects of the Italian Institute for the Physics of Matter (INFM) and the CNR Center for the Physics Surfaces and Low Temperatures – CFSBT  
Laboratory management in Low Temperature Physics.  
Noise measurements and models.  
High Temperature Superconductivity.

FROM 1984 TO 1996

Physicist  
Dipartimento di Fisica  
Via Dodecaneso 33 16146 GENOVA  
Head of GNSM/CNR projects in the fields of intermediate valence in rare earths intermetallics, of Heavy Fermion in rare earth and uranium systems, Photoemission Spectroscopy and Synchrotron radiation applications for the study of physical properties of intermetallics.

EDUCATION AND TRAINING

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1980 Student at the Royal Holloway College University of London  
Laboratory for the Computer Simulations in Solids (prof. K.Singer) – Development of interatomic force models in solids

FROM 1978 TO 1980 Student at the International School “Enrico Fermi” in Varenna – Italian Physical Society —  
director: prof. van Kranendonk

1978 Student at the Theoretical Physics Department of the University of Oxford  
Supervisor Prof. Fausto Fumi – Interatomic potentials – Ionic sizes – dynamical force models

PERSONAL SKILLS

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ORGANISATIONAL SKILLS  
AND COMPETENCES

Vast experience in team and project management in the INFM and CNR Institutions and the medical school and for competitions for research fundings  
Broad experiences in the teaching of experimental physics in science and medical faculties  
Skilled in development of measurement instrumentation, cryogenics, sensors applications

**COMPUTER SKILLS AND COMPETENCES**

- LabView – National Instruments
- Microsoft Word, Microsoft PowerPoint, Adobe Acrobat
- Database: SigmaPlot -, Microsoft Excel -
- PhotoEditing: Adobe Photoshop
- PC Operation Systems: DOS - Windows since 98 - Windows 7
- MOODLE - Aulaweb

**ADDITIONAL INFORMATION**

- Member of the Scientific Board of the magazine Comparative Effectiveness Research.
- Referee of many magazines in the field of Biophysics and High Temperature Superconductivity.

**CURRENT TEACHING**

- Applied Physics for Odontoiatria e Protesi Dentaria
- Medical Physics for Professioni Sanitarie
- Medical Physics for Scienze Infermieristiche
- Medical Physics for Scienze Motorie
- Applied Physics for the Scuola di Specializzazione in Medicina Preventiva
- Mechanics of Rigid Body Corso di laurea in Fisioterapia e Podologia

**Recent Scientific Publications**

- J Rivera-Gomis, R Eggenhöfner, et al. **Good farming practices in apiculture** Rev Sci Tech 2019 Dec;38(3):879-890. doi: 10.20506/rst.38.3.3032
- Marco Pietropaoli, Roberto Eggenhöfner, et al. **BPRACTICES Project: Towards a Sustainable European Beekeeping** BEE WORLD2020, VOL. 97, NO. 3, 66-69 doi.org/10.1080/0005772X.2020.1757220
- Isacco Montroni, Roberto Eggenhöfner et al **GOSAFE - Geriatric Oncology Surgical Assessment and Functional rEcovery after Surgery: early analysis on 977 patients** J Geriatr Oncol. 2020 Mar;11(2):244-255. doi: 10.1016/j.jgo.2019.06.017. Epub 2019 Sep 3.
- J.Rivera-Gomis, R.Eggenhöfner, G.Formato et al.**New indicators and on-farm practices to improve honeybee health in the Aethina tumida era in Europe** Apimondia International Congress 2017 Abstract book pag. 116
- Riva, A., Giacomelli, L., Totogni, S., Franceschi, F., Eggenhoffner, R., Zuccarini, M.C., Belcaro, G. **Oral administration of a lecithin-based delivery form of boswellic acids (Casperome®) for the prevention of symptoms of irritable bowel syndrome: A randomized clinical study** (2019) Minerva Gastroenterologica e Dietologica, 65 (1), pp. 30-35. DOI: 10.23736/S1121-421X.18.02530-8
- Riva, A., Corti, A., Belcaro, G., Cesarone, M.R., Dugall, M., Vinciguerra, G., Feragalli, B., Zuccarini M, Eggenhöfner, R., Giacomelli, L. **Interaction study between antiplatelet agents, anticoagulants, diabetic therapy and a novel delivery form of quercetin** (2019) Minerva Cardioangiologica, 67 (1), pp. 79-83. DOI: 10.23736/S0026-4725.18.04795-3
- Bragazzi NL., McGonagle D., Watad S., Adawi M., Mahroum N., Damiani G., Conic R., Bridgewood C., Mahagna H., Giacomelli L., Eggenhöfner R., Mahamid M., Pigatto PDM., Amital H., Watad A. **Immunogenicity, safety and tolerability of anti-pneumococcal vaccination in systemic lupus erythematosus patients: An evidence-informed and PRISMA compliant systematic review and meta-analysis.** Autoimmun Rev.

2018 Nov 5. pii: S1568-9972(18)30264-7. doi: 10.1016/j.autrev.2018.08.002. Vol 18, Issue 1, January 2019, Pages 73-92

- Riva A., Vitale J.A., Belcaro G., Hu S., Feragalli B., Vinciguerra G., Cacchio M., Bonanni E., Giacomelli L., Eggenhöfner R., Stefano Togni S. **Quercetin phytosome® in triathlon athletes: a pilot registry study.** *Minerva Medica* 2018 August;109(4):285-9 DOI: 10.23736/S0026-4806.18.05681-1
- Belcaro G., Dugall M., Luzzi R., Hosoi M., Ledda A., Feragalli B., Hu S., Ganguly A., Eggenhöfner R., Corti A., Giacomelli L. **Phytoproflex®: supplementary management of osteoarthritis: a supplement registry.** *Minerva Medica* 2018 April;109(2):88-94 DOI: 10.23736/S0026-4806.17.05460-X
- Giacomelli L., Togni S., Meneghin M., Eggenhöfner R., Maramaldi G. **In vivo validation of the multicomponent powder (Vitachelox®) against the deposition of polluting ions.** *Clinical, Cosmetic and Investigational Dermatology* 2018;11 109–113. DOI <https://doi.org/10.2147/CCID.S156324>
- Riva, A. Togni, S., Giacomelli, L., Franceschi, F., Eggenhoffner, R., Feragalli, B., Cacchio, M., Shu, H., Dugall, M. **Effects of a curcumin-based supplementation in asymptomatic subjects with low bone density: a preliminary 24-week supplement study.** *European review for medical and pharmacological sciences* Open Volume Access 21, 2017, 1684-1689
- Knirsch, M.C., Dell'Anno, F., Salerno, M., Larosa, C., Polakiewicz, B., Eggenhöfner, R., Converti, A. **Combined characterization of bovine polyhemoglobin microcapsules by UV-Vis absorption spectroscopy and cyclic voltammetry.** *Bioprocess and Biosystems Engineering*, Volume 40, Issue 3, 2017, Pages 431-438
- Ledda A., Belcaro G., Dugall M., Riva A., Togni S., Eggenhoffner R., Giacomelli L. **Highly standardized cranberry extract supplementation (Anthocran®) as prophylaxis in young healthy subjects with recurrent urinary tract infections.** *European review for medical and pharmacological sciences* . Open Access Volume 21, Issue 2, 1 January 2017, Pages 389-393
- Sacco R. , Eggenhoffner R. Giacomelli L. **Glutathione in the treatment of liver diseases: Insights from clinical practice(Review)** *Minerva Gastroenterologica e Dietologica* Volume 62, Issue 4, 2016, Pages 316-324
- Togni S., Maramaldi G., Meneghin M., Giacomelli L., Cattaneo R., Eggenhöfner R., Burastero S. **In vitro evaluation of quercetin anti-allergic and anti-oxidant properties.** Submitted to *European Review for Medical and Pharmacological Sciences*.
- Ghisellini P., Caiazza M., Alessandrini A., Eggenhöfner R., Vassalli M., Facci P. **Direct electrical control of IgG conformation and functional activity at surfaces.** *Scientific Report* 2016 Nov 24;6:37779. DOI: 10.1038/srep37779-2016
- Di Pierro F, Togni S, Franceschi F, Eggenhöfner R, Giacomelli L. **Effects of standardized Ginkgo biloba extract complexed with phosphatidylserine (Virtiva®) on physiological response to prolonged, intense physical activity.** *Minerva Ortop Traum* 2016 September;67(3):119-23
- Maramaldi G, Giacomelli L, Meneghin M, Eggenhöfner R, Togni S. **Effectiveness of a multi-component lotion in the control of hair loss** *Dermatological Experiences* 2016;18:70-5.
- Togni S, Maramaldi G, Pagin I, Cattaneo R, Eggenhöfner R, Giacomelli L. **Quercetin-phytosome 2% cream: evaluation of the potential photoirritant and sensitizing effects.** *Dermatological Experiences* 2016;18:85-7.

- Sacco R, Eggenhöfner R, Giacomelli L. **Glutathione in the treatment of liver diseases: insights from clinical practice.** *Minerva Gastroenterol Dietol.* 2016 Dec;62(4):316-324. Epub 2016 Sep 7.
- Grasselli E, Spera R, Ghisellini P, Rando C, Fabbri R, Chiappelli F, Giacomelli L, Canesi L, and Eggenhöfner R, **Endocrine Disrupting Chemicals Release in New Nanostructured Odontoiatric Resins.** *J Dent. Res.* 95(Spec Iss A):0600, URL, 2016.
- Lupoli G, Di Egidio F, Eggenhöfner R, Altiger A, Amaddeo A, Ghisellini P, Barraco G, Gallottini C, Eramo S, Torchia S, Roncoroni C, and Barbaro K, **Bone regeneration loss with mesenchymal stem cells and hydroxyapatite in human and veterinarian applications,** *J Dent. Res.* 95(Spec Iss A):1104, URL, 2016.
- Lupoli G, Di Egidio F, Eggenhöfner R, Barraco G, Eramo S, Gallottini C, Ghisellini P, Rando C, Amaddeo A, Altiger A, Torchia S, Lai O, and Barbaro K, **Periodontal Tissue Regeneration with Mesenchymal Stem Cells and Nano-Hydroxyapatite,** *J Dent. Res.* 95(Spec Iss A):1105, URL, 2016.
- Canonici F, Lupoli G, Barraco G, Eggenhöfner R, Gallottini C, Ghisellini P, Amaddeo A, Zepparoni A, Cocumelli C, Torchia, Alfieri L, Eramo S, and Barbaro K, **Articular Cartilage Repair: regeneration of hyaline cartilage in joints damaged,** *J Dent. Res.* 95(Spec Iss A):1106, URL, 2016.
- Spera R, Terencio T, Ghisellini P, Rando C, Giacomelli L, Chiappelli F, Mazzolai B, and Eggenhöfner R, **Innovative Nanostructured Fillers for Dental Resins,** *J Dent. Res.* 95(Spec Iss A):1364, URL, 2016.
- Sorrenti E, Capurro P.M, Barberis F, Giacomelli L, Eggenhöfner R, and Benedicenti S, **Primary Stability: Influence of Bone and Insertional Torque on Micromotion,** *J Dent. Res.* 95(Spec Iss A):1757, URL, 2016.
- Sacco R, Conte C, Tumino E, Parisi G, Marceglia S, Metrangolo S, Eggenhöfner R, Bresci G, Cabibbo G, Giacomelli L. **Transarterial radioembolization (TARE) for hepatocellular carcinoma: a review.** *J Hepatocell Carc* 2016;3:25-9.
- Pellegrini L, Milano E, Franceschi F, Belcaro G, Gizzi G, Feregalli B, Dougall M, Luzzi R, Togni S, Eggenhöfner E, Giacomelli L. **Managing Ulcerative Colitis in remission phase: usefulness of Casperome®, an innovative lecithin-based delivery system of Boswellia serrata extract.** *Eur Rev Med Pharmacol Sci* 2016;20:2695-700
- Sacco R, Antonucci M, Bresci G, Corti A, Giacomelli L, Mismas V, Rainieri M, Romano A, Eggenhöfner R, Tumino E, Cabibbo G. **Curative therapies for hepatocellular carcinoma: an update and perspectives.** *Exp Rev Anticancer Ther* 2016;16:(2)169-175. DOI:10.1586/14737140.2016.1123625
- Maramaldi G, Togni S, Pagin I, Giacomelli L, Cattaneo R, Eggenhöfner R, Burastero S. **Soothing and anti-itch effect of quercetin phytosome in human subjects: a single-blind study.** *Clinical, Cosmetic and Investigational Dermatology* 2016;9:55–62 <https://doi.org/10.2147/CCID.S98890>
- Franceschi F, Feregalli F, Togni S, Cornelli U, Giacomelli L, Eggenhöfner R, Belcaro G. **A novel phospholipid delivery system of curcumin (Meriva®) preserves muscular mass in healthy aging subjects.** *European Review for Medical and Pharmacological Sciences.* 2016;20:762-766.
- Salerno M, Patrizia Loria P, Matarazzo G, Tomè F, Diaspro A, and Eggenhöfner R. **Surface Morphology and Tooth Adhesion of a Novel Nanostructured Dental Restorative Composite.** *Materials* 2016;9(3),203; doi:10.3390/ma9030203

- Sacco R, Conte C, Marceglia S, Mismas V, Bresci G, Romano A, Eggenhöfner R, Giacomelli L. **Beneficial and detrimental effects of natural dietary products on the risk of hepatocellular carcinoma, and their role in its management.** *Hepatoma Res* 2016;2:53-61.
- S. Togni, G. Maramaldi, M. Meneghin, L. Giacomelli, R. Cattaneo, R. Eggenhöfner, S. Burastero. **Antiallergic and antioxidant properties of a lecithin-based delivery form of quercetin: an in vitro evaluation.** *Dermatological Experiences* 2015;17:97-101.
- Eggenhöfner R, Terencio T., Spera R., Ghisellini P., Rando C., Giacomelli L.. **Innovative fillers for dental resin.** *Comparative Effectiveness Research (CER): New Methods, Challenges and Health Implications* Chiappelli, F. (Ed), in press by NOVA Publishers, Hauppauge, NY, release date: December 2015.
- Sorrenti E, Giacomelli L, Eggenhöfner R, Benedicenti S. *Comparative Effectiveness Research (CER): New Methods, Challenges and Health Implications* Chiappelli, F. **Study of primary stability in implantology: correlation to bone density and peak insertion torque.** (Ed), in press by NOVA Publishers, Hauppauge, NY, release date: December 2015.
- Loria P, Matarazzo G, Spera R, Ghisellini P, Rando C, Grasselli E, Fabbri R, Canesi L, Eggenhöfner R. **New nanostructured odontoiatric resins: Surface roughness and endocrine disruptors release.** *Dental Materials*, Volume 30, Supplement 1, 2014, Page 173 .
- Loria P, Ottoboni S, Michelazzi L, Giuria R, Ghisellini P, Rando C, and Eggenhöfner R. **Salivary cortisol in an extreme non-competitive sport exercise: winter swimming.** *Natural Science*, 2014, 6, 387-398.

## CONFERENCE PAPER

- **Stem cells in tissue regeneration and osteogenesis: an overview** Luca Giacomelli, Roberto Eggenhöfner, *BioMaH Proceedings* pag 343 October 17-20, 2016 Rome, Italy.
- **Endocrine Disrupting Chemicals Release in New Nanostructured Odontoiatric Resins**, Elena Grasselli, Rosanna Spera, Paola Ghisellini, Cristina Rando, Rita Fabbri, Francesco Chiappelli, Luca Giacomelli, Laura Canesi, and Roberto Eggenhöfner, *AADR Annual Meeting Los Angeles, California, Mar 16-19, 2016.*
- **Bone regeneration loss with mesenchymal stem cells and hydroxyapatite in human and veterinarian applications**, Grazia Lupoli, Fiorella Di Egidio, Roberto Eggenhöfner, Alessia Altigeri, Alessia Amaddeo, Paola Ghisellini, Giancarlo Barraco, Claudio Gallottini, Stefano Eramo, Saul Torchia, Cristina Roncoroni, and Katia Barbaro, *AADR Annual Meeting Los Angeles, California, Mar 16-19, 2016.*
- **Periodontal Tissue Regeneration with Mesenchymal Stem Cells and Nano-Hydroxyapatite**, Grazia Lupoli, Fiorella Di Egidio, Roberto Eggenhöfner, Giancarlo Barraco, Stefano Eramo, Claudio Gallottini, Paola Ghisellini, Cristina Rando, Alessia Amaddeo, Alessia Altigeri, Saul Torchia, Olga Lai, and Katia Barbaro, *AADR Annual Meeting Los Angeles, California, Mar 16-19, 2016.*
- **Articular Cartilage Repair: regeneration of hyaline cartilage in joints damaged**, Fernando Canonici, Grazia Lupoli, Giancarlo Barraco, Roberto Eggenhöfner, Claudio Gallottini, Paola Ghisellini, Alessia Amaddeo, Alessia Zepparoni, Cristiano Cocumelli, Saul Torchia, Lavinia Alfieri, Stefano Eramo, and Katia Barbaro, *AADR Annual Meeting Los Angeles, California, Mar 16-19, 2016.*
- **Innovative Nanostructured Fillers for Dental Resins**, Rosanna Spera, Tercio Terencio, Paola Ghisellini, Cristina Rando, Luca Giacomelli, Francesco Chiappelli, Barbara Mazzolai, and Roberto Eggenhöfner, *AADR Annual Meeting Los Angeles, California, Mar 16-19, 2016.*
- **Primary Stability: Influence of Bone and Insertional Torque on Micromotion**, Eugenio Sorrenti, Pietro Marco Capurro, Fabrizio Barberis, Luca Giacomelli, Roberto Eggenhöfner, and Stefano Benedicenti, *AADR Annual Meeting Los Angeles, California, Mar 16-19, 2016.*

- **Nanotubi di TiO<sub>2</sub>: innovative applicazioni nella scienza dei materiali dentali e nella ricostruzione postendodontica.** Paola Ghisellini, Grazia Lupoli, Katia Barbaro, Stefano Pagano, Giancarlo Barraco, Stefano Eramo, Rosanna Spera, Tercio Terencio, Saul Leonardo Torchia, Cristina Rando, Barbara Mazzolai, Roberto Eggenhöfner. 34° Congresso Nazionale SIE - Guardando al futuro – Bologna 5-7 Novembre 2015.
- **Harnessing antibodies at an electrode surface: electrical control of IgG conformation and functional activity** Paola Ghisellini, Marialuisa Caiazzo, Andrea Alessandrini, Roberto Eggenhöfner, Massimo Vassalli, Paolo Facci "Biophysics of Proteins at Surfaces" Madrid October 13-15 2015.
- **Morphological investigations on TiO<sub>2</sub> nanotubes in dental materials.** Rosanna Spera, Laura Pastorino, Tercio Terencio, Paola Ghisellini, Cristina Rando, Barbara Mazzolai and Roberto Eggenhöfner. Poster presentation. Congresso NAMABIO COST – Venezia 25-27 Marzo 2015
- **Effect of Nanohydroxyapatite on the in vitro growth of mesenchymal stem cells isolated from adipose tissue of dog.** K. Barbaro, F. Di Egidio, A. Amaddeo, A., F. Canonici, G. Barraco, G. Lupoli, C. Gallottini, R. Eggenhöfner, P. Ghisellini, C. Roncoroni, D. Amaddeo. Oral presentation: Congresso NAMABIO COST – Venezia 25-27 Marzo 2015
- **Cartilage Repair: study of in vitro differentiation of chondrocytes isolated from equine trachea.** K. Barbaro, F. Di Egidio, A. Amaddeo, A. F. Canonici, G. Barraco, G. Lupoli, C. Gallottini, R. Eggenhöfner, P. Ghisellini, C. Roncoroni, D. Amaddeo. Congresso NAMABIO COST - Venezia 25-27 Marzo 2015
- NANOSMAT Conference "9th International Conference on Surfaces, Coatings and Nanostructured Materials. Dublino 8-11 settembre 2014. **Detection of Antidepressant Drugs by Bio-device Based on Cytochrome P450**
- *Rosanna Spera, Paola Ghisellini, Laura Pastorino, Cristina Rando, Roberto Eggenhöfner.* NANOSMAT Conference "9th International Conference on Surfaces, Coatings and Nanostructured Materials. Dublino 8-11 settembre 2014. **Atomic Force Microscope Study of a Nanostructured Filler for Dental Resin.** P. Loria, T. Terencio, P. Ghisellini, C. Rando, R. Spera, M. Salerno, R. Eggenhöfner.
- The Academy of Dental Materials ADM 2014. Ottobre 8-11 Bologna. Poster **"New Nanostructured Odontoiatric Resins: Surface Roughness and Endocrine Disruptors Release."**
- Workshop Nuovi approcci in Nanomedicina ed Ingegneria Tissutale. 27 settembre 2013 Napoli. Abstract. **"Biosensori e applicazioni ni nanoparticelle in polimeri"**.
- 5th European Congress for Integrative Medicine. 21-22 settembre 2012 Firenze. Poster **"Is cortisol the real indicator of adaptation syndrome? Can risks from physical exercise be predicted on the bases of nowadays knowledge?"**
- 1° Congresso Nazionale Società Italiana di Medicina dello Sport e dell'esercizio. 4-5 Novembre 2011 Firenze. Presentazione orale **"Considerazioni sullo stress positivo tramite valutazione dell'andamento del cortisolo salivare nei nuotatori del tempo avverso (cimentisti invernali)"**.
- Congresso internazionale di psiconeuroendocrinoimmunologia. 27-30 ottobre 2011 Orvieto. Presentazione orale **"Analisi dell'attività dell'asse neuro-endocrino indotte da eustress"** Poster **"Sviluppo di un biosensore per la determinazione del cortisolo salivare nello studio dell'attività dell'asse neuro-endocrino"**.