



Research **A**ctivities:

Initially the interest was focused on standard and dynamic electrocardiography, particularly to some diagnostic aspects and prognostic stratification of patients presenting ischaemic cardiac disease.

These studies led to the publication of some original data. (see also [“Produzione Scientifica”](#))

Subsequently studies were focused on problems concerning the epidemiology and prognostic aspect of ischaemic heart disease (see also “Scientific Articles” Session for specific references)

Subsequently used the echocardiogram in the study of some arrhythmias in patients in which electrocardiographic diagnosis was difficult or even impossible (see also [“Produzione Scientifica”](#))

Subsequently studies were focused on some clinical aspects of sympatho-vagal imbalance in patients with diabetes mellitus and in patients with coronary artery diseases. The clinical aspects concern the early diagnosis of autonomic neuropathy in diabetic patients using new algorithms in the investigation of Chaotic Heart Rate Variability and the linear variability of Heart Rate (spectral analysis). These studies were carried out in collaboration with the mathematicians of the Castelnuovo Institute of the Faculty of the Mathematics and Physics Sciences of the “La Sapienza” University of Rome. (see also [“Produzione Scientifica”](#))

The undersigned has found that the prevalence of Coeliac Disease is greater in patients with Idiopathic Dilated Cardiomyopathy than in the general population, and that a gluten-free diet has positive effects on cardiac performance. The demonstration of this new, non casual, association between cardiac and ileo-digiunal diseases has aroused particular interest in the scientific community as shown by the citations on the matter. **Our results have been confirmed in the recent paper :**

World J Cardiol 2017 August 26; 9(8): 652-666

Cardiovascular involvement in celiac disease: Edward J Ciaccio, Suzanne K Lewis, Angelo B Biviano, Vivek Iyer, Hasan Garan, Peter H Green ISSN 1949-8462 (online) DOI: 10.4330/wjc.v9.i8.652

<https://www.ncbi.nlm.nih.gov/pubmed/28932354>

(see also [“Produzione Scientifica”](#))

Recently the research has been focused on evaluation of arrhythmic risk, evaluated with 24 hour ecg monitoring, in patients affected by different kind of secondary hypertension i.e. : Primary hyperaldosteronism and hyperparathyroidism. In this last group of patients it has been also observed a reduction in arrhythmic risk, as consequence of parathyroidectomy. These studies has been carried out in collaboration with Prof. Claudio Letizia and with Prof. Salvatore Minisola and with Dr. Jessica Pepe (see also “Produzione Scientifica”)

The comparisons of microvascular and macrovascular changes in patients with aldosteronism-related hypertension respect to patients affected by essential hypertension, showed an increased negative vascular remodelling in patient with hyperaldosteronism. This observation suggest that the presence of an added micro-macro vascular lesions in hypertension, due to hyperaldosteronism, should be linked to a possible negative role played by Aldosteron. These studies has been possible also for the collaboration of **IRRCs G:B: BIETTI Foundation** <https://www.fondazionebietti.it/> (see also “Scientific Articles”)

Starting from the relationship between intraventricular volume and QRS Amplitude, we monitored the QRS amplitude modifications in clinical situations in which the intraventricular volume changes quickly such as during dialysis treatment or during ECG stress test. We confirmed a sensitivity of QRS amplitude to modifications in circulating volume during dialysis and observed a different behaviour between normal subjects and patients with history of coronary heart diseases and negative ST criterion. These data suggest that the QRS amplitude criterion may be used in addition to ST criterion in patients negative to ST criterion. (see also "Scientific Articles")