

'Do Research with Seriousness and Perseverance'

An Interview with Prof. Lucio Gullo

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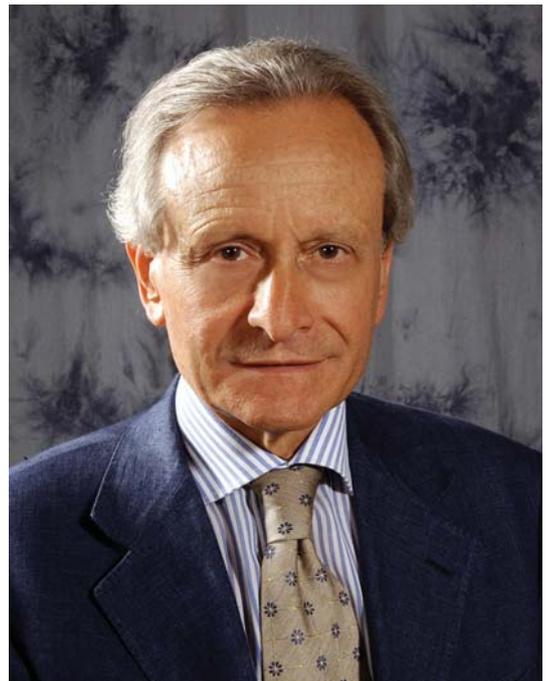
Abstract

In the current interview Prof. Lucio Gullo, a worldwide-recognized pancreatologist for his contribution on the understanding of the pathogenesis and clinical aspects of a number of pancreatic diseases including benign pancreatic hyperenzymemia, shares with *Pancreatology* his life experiences as a scientist in pancreatic research.

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M.F.-Z.: What initiated you to work in pancreas research in the first place?

L.G.: My work in pancreas research began by chance. I started my medical career at the Institute of Internal Medicine of the University of Bologna, at Sant'Orsola Hospital, where research was being conducted mainly in the field of gastroenterology. At that time Prof. Giovanni Fontana, who had a particular interest in the pancreas, asked me to work with him to acquire an interest in that organ. The truth is that I preferred endocrinology, but because I wanted to remain in the institute, I agreed. The director of the institute, a great clinician by the name of Prof. Giuseppe Labò, agreed with this choice and charged Prof. Fontana and another of his assistants, Prof. Giovanni Gasbarrini, to make arrangements for me to study abroad. As an aside, I would like to mention that these two physicians were among the first in Italy to perform research in the field of pancreatic disease, Prof. Fontana in the study of acute and chronic pancreatitis and of func-



tional investigation of the pancreas, and Prof. Gasbarrini in studies of the effects of various types of diet on rat pancreas utilizing electron microscopy. It was due to the merit of these two illustrious physicians that I was sent to Marseille to work at the Pancreatic Research Unit directed by the well-known pancreatologist, Prof. Henri Sarles.

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During the two years I spent in Marseille I had the great experience and good fortune of having Prof. Sarles, a consummate physician and researcher, as a mentor, not only for research but also for broader aspects of life. Among the principal works on which I collaborated in that period were studies on the relationships between alcohol and the pancreas, in man and in the dog, the findings of which resulted in a better understanding of the pathogenesis of alcoholic chronic pancreatitis.

On my return to Bologna, I established a Unit for the Study of Pancreatic Diseases within the Institute of Internal Medicine, with the help of my talented and dedicated colleague Dr. Pier Lorenzo Costa. Among the studies I first carried out were those regarding chronic pancreatitis in Italy, about which little was known, as well as several works concerning relationships between the exocrine pancreas and various endocrine glands, demonstrating the existence of functional interactions between them. Almost all of these papers were published in *Gastroenterology* from 1977 to 1991. In that period I also did some studies in gallbladder physiology. In one that gave me particular satisfaction I demonstrated, for the first time, that in man, contrary to what was generally believed, the response of the gallbladder to cholecystokinin is largely dependent on cholinergic innervation (*Digestion* 1984). After Dr. Costa's departure, Drs. Maurizio Ventrucci and Raffaele Pezzilli provided invaluable assistance. Dr. Pezzilli worked with me for several years, during which he was a very helpful collaborator for many studies. The most noteworthy of these was a work on diabetes and pancreatic cancer in which we demonstrated that diabetes is not a risk factor for pancreatic cancer, as was previously believed, but rather, that diabetes can be caused by the tumor, often occurring at the beginning of its course. This paper was published in the *New England Journal of Medicine* in 1994. I have continued to work at the same Institute of Internal Medicine, at the University of Bologna, never having wanted to change my place of work.

M.F.-Z.: You have pioneered pancreas research in so many directions. At the end of the day, what has given you the most personal satisfaction?

L.G.: Currently I am most satisfied by the outcome of my recent studies that have led to the discovery of a new syndrome, benign pancreatic hyperenzymemia, which has the wonderful characteristic of being a benign anomaly rather than a disease [Gullo L: *Gastroenterology* 1996;110:1905–1908, *Pancreas* 2000;20:158–160, *Clin Gastroenterol Hepatol* 2007;5:70–74 and *Dig Liver Dis* 2007;39:698–702; Gullo L, et al: *Pancreatology* 2003;3:191–194, *Dig Liver Dis* 2003;35:58–60, *Pancreas* 2005;31:350–

352 and 2006;33:351–353, *Eur J Ped* 2007;166:125–129 and *Gut* 2007, in press]. It gives me a really good feeling to be able to tell a person who thinks that he has some possibly serious disease that he has nothing to worry about.

Another source of great satisfaction to me is that, as special recognition for excellence in scientific achievement, the Faculty of Medicine of the University of Bologna awarded me the title of Professor of Internal Medicine and Director of the Institute of Internal Medicine.

I would like to add that over the many years of my career I have had the good fortune of having several very talented and capable individuals working with me who have been collaborators in the true sense of the word, doing far more than was required of them, often working long hours with me in the clinic or the laboratory. With these persons I have developed life-long bonds of affection and friendship. Among these are, in addition to the coworkers mentioned above, Drs. Patrizia Priori, Annibale Cassano and, more recently, Marina Migliori. Another is my long-time collaborator, Ms. Janice Capan, who, in addition to her work in the laboratory, has been providing me with her invaluable linguistic assistance, translating and editing my texts for publication. I must also mention Prof. Paola Tomassetti, a great friend of mine and a well-known expert in gastroenteropancreatic endocrine tumors, who conceded me the pleasure of collaborating with her on several important papers about these tumors. In one that gave me particular satisfaction, published in the *New England Journal of Medicine* in 2000, we reported that type II gastric carcinoid tumors can be eradicated by treatment with somatostatin analogs. Finally, I would like to mention Dr. Roberto De Giorgio, a well-known expert in neurogastroenterology, who collaborated with me in studies of gastrointestinal hormones and the pancreas at the beginning of his career, and who has remained one of my closest friends.

M.F.-Z.: Based on your experience as mentee and mentor, can you comment on the value of mentorship for the development of new investigators?

L.G.: Mentor was the teacher of Telemachus, the son of Ulisses, in Homer's epic poem, the 'Odyssey'. This name has come to mean a wise and trusted advisor who has a kind of paternal authority. I have absolutely no doubt that the presence of this kind of a guide is essential for the formation of a new investigator.

M.F.-Z.: What is the best advice you have received during your career? What is your advice to the young investigators who are beginning in the field of pancreas research?

L.G.: The best advice I received is to do research with seriousness and perseverance, and when writing about it to scrupulously describe exactly what is found. To young researchers I would give the same advice, adding that clarity and simplicity should be guiding principles when formulating studies, as should brevity or, better, condensation when writing or otherwise reporting about them.

M.F.-Z.: What do you think are the big questions that need to be answered in pancreatology?

L.G.: One of the most important is how can we diagnose pancreatic cancer at a treatable stage. One potential solution would be to find a sensitive, specific and low-cost serum marker for a tumor precursor (pancreatic dysplasia or carcinoma in situ). We know now that the progression of cells from a normal state to dysplasia to carcinoma in situ is associated with numerous genetic changes, including activation of oncogenes and inactivation of suppressor genes. So far, more than 100 genes have been identified that are expressed in pancreatic cancer but not by normal pancreatic tissue. Any of these genes could offer an opportunity to develop a test for early detection of this type of tumor. As for who should be tested, certainly those individuals who are considered to have an increased risk (family history of pancreatic cancer, personal history of hereditary pancreatitis, familial atypical mole-multiple melanoma syndrome, Peutz-Jeghers syndrome, Li-

Fraumeni syndrome) should be included, but since these are a small minority of those who develop the tumor, an ideal test would be a simple one that could be easily performed on everyone over the age of 50 years.

Another important question concerns the still elevated mortality for severe acute necrotizing pancreatitis; this could almost certainly be lowered if we understood more of its pathogenesis. In fact, a crucial piece of knowledge that remains unknown is the identity of the factor that triggers this disease: if this were known, we might be able to develop a preventive strategy.

M.F.-Z.: What do you think is the major need that a journal like *Pancreatology* should fulfil?

L.G.: I believe that the primary scope of a good journal, such as *Pancreatology*, is to publish articles of optimal quality that can make a contribution to our fund of knowledge, whether clinical or regarding basic research. The higher the quality of the articles chosen by a journal, the more it will attract readers and authors of a similar level. Ideally a journal should also allow some space for exchange of ideas, e.g. revisions, comments, criticisms and editorials, which are always important.

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