



Editorial

Editorial to the Special Issue “Clinical Immunology in Italy, with Special Emphasis to Primary and Acquired Immunodeficiencies: A Commemorative Issue in Honor of Prof. Fernando Aiuti”

Alessandro Aiuti ^{1,2,*}, Raffaele D’Amelio ^{3,†} , Isabella Quinti ^{4,*} and Paolo Rossi ^{5,6}

¹ Faculty of Medicine and Surgery, Vita-Salute S. Raffaele University, 20132 Milan, Italy

² San Raffaele Telethon Institute for Gene Therapy (SR-Tiget), IRCCS San Raffaele Scientific Institute, 20132 Milan, Italy

³ Department of Clinical and Molecular Medicine, Sapienza University of Rome, S. Andrea University Hospital, 00189 Rome, Italy; raffaele.damelio@gmail.com

⁴ Department of Molecular Medicine, Sapienza University of Rome, 00185 Rome, Italy

⁵ Research Unit of Clinical Immunology and Vaccinology, Bambino Gesù Children’s Hospital, 00165 Rome, Italy; rossipa@uniroma2.it

⁶ Department of Systems Medicine, University of Rome “Tor Vergata”, 00133 Rome, Italy

* Correspondence: aiuti.alessandro@hsr.it (A.A.); isabella.quinti@uniroma1.it (I.Q.)

† Retired.

Fernando Aiuti (Figure 1), born in Urbino on 8 June 1935, suddenly died on 9 January 2019, leaving a great void not only among his family members and those who knew him and appreciated his great humanity and acute intelligence, but in the entire immunological scientific community. We decided, therefore, to dedicate a Special Issue to the memory of Prof. Fernando Aiuti to highlight the great man and scientist that he was.



Citation: Aiuti, A.; D’Amelio, R.; Quinti, I.; Rossi, P. Editorial to the Special Issue “Clinical Immunology in Italy, with Special Emphasis to Primary and Acquired Immunodeficiencies: A Commemorative Issue in Honor of Prof. Fernando Aiuti”. *Biomedicines* **2023**, *11*, 3191.

<https://doi.org/10.3390/biomedicines1123191>

Received: 7 October 2023

Accepted: 14 November 2023

Published: 30 November 2023



Copyright: © 2023 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

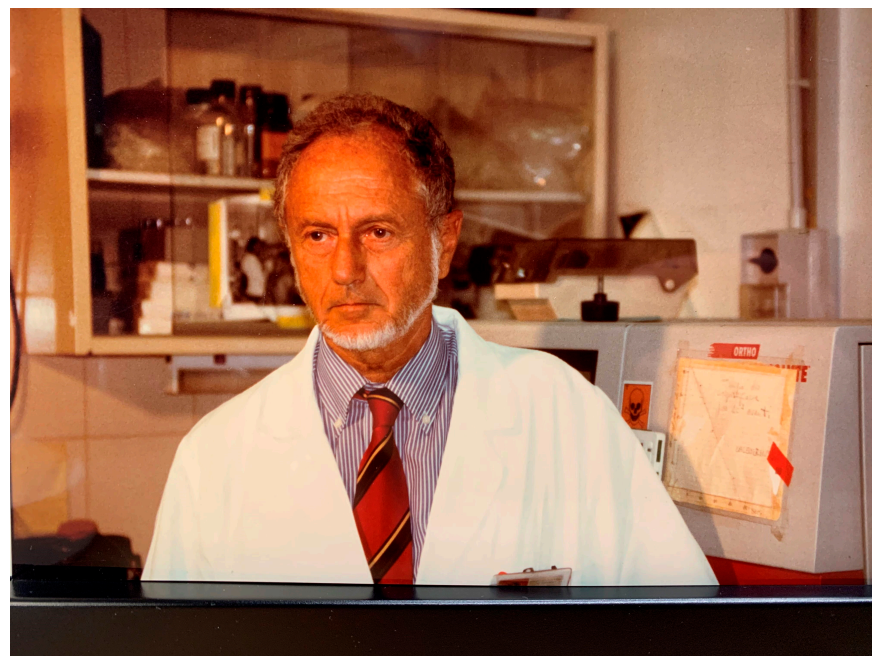


Figure 1. Fernando Aiuti in the Laboratory of Immunology of the University.

Fernando Aiuti was an internationally renowned immunologist, an outstanding, brilliant, and intuitive researcher with a solid post-doc scientific and clinical background in infectious diseases, who provided a relevant contribution to the birth of clinical immunology in Italy in the recent decades of the twentieth century. He was called to hold

one of the first three chairs of clinical immunology in Italy in 1980 as full Professor of Clinical Immunology and Allergy at Sapienza, University of Rome, a role he held for over a quarter of a century up to 2007 (in the last ten years, he switched to the title of full Professor of Internal Medicine). In 1989, he organized the School of Specialization in Allergy and Clinical Immunology of Sapienza, University of Rome, which was directed by him from 1989 to 2007, training tens of young immunologists. His scientific fields of interest ranged from basic immunology, where he provided relevant contributions while working together with Hans Wigzell in Sweden in the early 1970s, through the setting up of a method for the identification of human T lymphocytes in normal subjects and immunodeficiency states [1–3], to clinical immunology, particularly in primary [4–71] and acquired [72–188] immunodeficiencies. The method that Aiuti and Wigzell set up to identify T lymphocytes was simple but at the same time brilliant, considering the period just a few years after the discovery of T and B lymphocytes [189], and the difficulty in handling and recognizing lymphocytes (only one method for identifying T lymphocytes had been discovered [190] just a few months before their publication). They prepared an anti-human T serum by inoculating in rabbits pure T lymphocytes, taking advantage of the availability of the peripheral blood lymphocytes of a patient with Bruton type agammaglobulinemia, a pathological condition characterized by a lack of B lymphocytes, thus avoiding any need to extensively purify the antigen to be inoculated [1]. Collaboration with the most renowned international groups of immunologists and clinical immunologists in Europe and the USA was a distinctive feature during his whole research career, in a period during which this attitude was uncommon in Italy. He was an expert member of the Commission for the Classification of Primary Immunodeficiencies of the World Health Organization for over twenty years (from 1975 to 1997), and his original contributions to the study of primary immunodeficiencies were in their diagnosis and pathogenesis [4–6,12–14,19–24,27–33,37,39–41,44,47–49,51–53,57,59–63,65–68,71], through their phenotypical characterization, and in treatment [9–11,13,16,18,34–36,38,42,43,45,46], with the then-pioneering bone marrow, fetal liver, and thymus transplantations, but even with thymic factors and immunoglobulins, for cellular and humoral defects, respectively. The safety of immunoglobulins for intravenous use by preventing HCV transmission was an issue he deeply cared about and actively pursued [50,54–56,64]. Together with Prof. Luisa Businco, who later became full Professor of Pediatrics at Sapienza University of Rome, he founded and managed, with the crucial support of Prof. Giuseppe Luzi, currently retired, the first Registry for Primary Immunodeficiencies in Italy [191,192], which now continues its relevant activity as the network for Primary Immunodeficiencies in Italy (IPINET). Together with other distinguished European Immunologists, Prof. Aiuti founded the European Group for Immunodeficiencies, which has grown now and developed into the European Society for Immunodeficiencies, which is very active in the field. An account of the beginnings of the European Society for Immunodeficiencies has been reported in this Special Issue by Roberto Paganelli, another student of Fernando Aiuti [193].

Since 1981, with the first description of the acquired immunodeficiency syndrome (AIDS), the main study interest of Fernando Aiuti was addressed to this new syndrome, in which he and his group provided many interesting scientific contributions to the epidemiology [75,80,83,84,89,97,98,100,110,112,115], pathogenesis [75,101,103,104,106,109,134,147,149,160], immunology [72–74,76–79,81,82,85–88,92–96,107,113,114,116,117,119–122,124–133,137–139,142,158,165,175], diagnosis [104,111,144,150,179], prophylaxis [135,143,145,151], and therapy [105,108,136,140,141,148,152–157,159,161–164,166–174,176–178,180–183,188], without neglecting the clinical [90,99,102,123,146] and psychosocial [118] aspects. In this period of his scientific career, Prof. Aiuti strongly felt the need to not be secret as a researcher to make the solidity of scientific information available to the general population and to remove false beliefs that could lead to the discrimination of categories of society, thus taking a public, social, and, later on, even political role in addition to the academic one. This new position can be witnessed in some of the books he wrote in that period. In 1993, in collaboration with the journalist Carlo Gallucci, Fernando Aiuti published a book

entitled “Nessuna Condanna (No Conviction)”, in which 10 years after the identification of the first case of AIDS in Italy, he described the stories of different AIDS patients; the title reflects his feeling in participating empathically in the suffering of patients and in helping them as a man of science through the scientific development, but without any moral judgment on the risk behaviors (drug addiction, homosexuality, sexual promiscuity) for HIV infection [194]. In the same period, he wrote the book “AIDS Sapere = Vivere (Knowing = Living)”, an informative book for helping people understand, and thus how to avoid, the disease, which was then still invariably lethal [195]. More recently, following his retirement from the university, he had the time to write another very appreciated informative book with his former collaborator Prof. Giuseppe Luzi, titled “Il Nostro Meraviglioso Sistema Immunitario (Our Wonderful Immune System)”, to bring clinical immunology closer to the general population, thus continuing his educational mission, which was the hallmark of his life, alongside research and the care of frail patients [196].

Prof. Aiuti was enthusiastic, moved by a sincere curiosity and the tireless willingness to look for an answer to several scientific and clinical questions for scientific development and in the interest of patients, towards whom he always maintained a very warm, human, and protective attitude. His contagious enthusiasm was a powerful spring for the scientific growth of his group, and with his collaborators, he was demanding but faithful in his friendship. Fernando Aiuti had a very authoritative and fascinating personality, thus many postgraduate students were attracted to his field of research, deciding to test their capacity in this field in a laboratory where the atmosphere was highly competitive at the international level; the feeling of the young collaborators was the awareness that they were facing relevant scientific problems by trying to construct new methods, through the innovative discipline of immunology, which was competitively managed in comparison to the excellent research groups in London, Paris, or New York, then among the reference sites of scientific innovation and high-quality research. Fernando Aiuti had many national and international collaborations; however, with some researchers, the relationship was even of sincere friendship. This was the case for Prof. Luigi Fontana, full Professor of Internal Medicine at the University of Rome, Tor Vergata, who had spent a period of study in Sweden for research in the same years as Fernando Aiuti, for the virologist Prof. Ferdinando Dianzani, full Professor of Medical Microbiology at Sapienza University of Rome and later on Dean of the Faculty of Medicine of the University “Campus Biomedico di Roma”, with whom Fernando Aiuti had a very fruitful collaboration on the study of human immunodeficiency virus (HIV), and for the pediatrician Prof. Luisa Businco, already mentioned above, with whom he described and treated many children with primary immunodeficiencies. All of them prematurely passed away. Among the collaborators of his laboratory, Prof. Maria Caterina Sirianni, who had worked for a certain period in Hans Wigzell’s laboratory in Sweden following the suggestion of Fernando Aiuti and was a great expert on natural killer cells and a hard worker, and Dr. Soccorso Le Moli, a biologist who worked with enthusiasm in the laboratory of Fernando Aiuti, then in the laboratory of immunology organized by Raffaele D’Amelio in the Italian Air Force and spent a period abroad conducting research in the laboratory of Giampietro Corradin in Lausanne, Switzerland, very precociously passed away. The occasion of this Special Issue in honor of Fernando Aiuti even presents the opportunity to remember these researchers and recognize the crucial role they had in building up a solid and respected field of clinical immunology by sharing Fernando Aiuti’s scientific vision.

Fernando Aiuti had many collaborators working in the Laboratory directed by him in his long scientific career, some of whom remained to work with him and made a scientific career in the University, the majority at Sapienza University of Rome, but even in other universities, as Franco Pandolfi, who became Professor of Internal Medicine at the Catholic University in Rome, or Roberto Paganelli at the University “Gabriele D’Annunzio” of Chieti-Pescara. The others continued their scientific careers in different hospitals, in the “Istituto Superiore di Sanità” or in the “Agenzia Italiana del Farmaco”, or even abroad, in the Netherlands, as Oscar Pontesilli.

The contributions to this Special Issue represent a tribute that many researchers, in large part former students of Fernando Aiuti, wanted to witness, providing largely original articles, which would have been very appreciated by Fernando, who was an innovator, always engaged in new scientific projects. In fact, out of 14 papers published in the Special Issue, 10 are original observations, whereas the remaining 4 refer to reviews or introductions to this Special Issue.

Isabella Quinti started her scientific career soon after her graduation at the University of Rome in 1978 in the laboratory of Prof. Fernando Aiuti, spent a period of her life in the USA, at Harvard University in Boston, and is currently full Professor of Internal Medicine at Sapienza, University of Rome, and Director of the Regional Centre for Primary Immunodeficiencies at the Umberto Ist University Hospital, the same one which had been first organized and directed by Fernando Aiuti. Isabella Quinti and co-workers submitted an excellent paper, in which they demonstrated that COVID-19 did not increase the mortality of 471 adults with Severe Primary Antibody Deficiencies compared with the pre-COVID period. Moreover, anti-COVID-19 monoclonal antibodies did result in being protective, whereas the anti-COVID-19 vaccines did not [197]. This excellent study on a very large number of patients, considering the relative rarity of these diseases, is a relevant contribution precisely in the field of primary immunodeficiencies and follows the same strategy of Prof. Aiuti, that is, testing the best ways to protect vulnerable patients with primary immunodeficiencies.

Massimo Fiorilli, together with Marcella Visentini and other co-workers, published a very interesting paper on the opposite effect of COVID-19 vaccines on CD3⁺,CD4⁺,CD25⁺,CD127^{low} putative regulatory T cells, the mRNA vaccine being stimulatory and the adenovirus vectored vaccine being inhibitory, in 24 patients with hepatitis C virus (HCV)-positive cryoglobulinemic vasculitis and in 25 healthy subjects [198]. This is a preliminary pilot study; however, they demonstrated so clearly that a polarized opposite effect allows these innovative vaccines to be better interpreted in their mechanism of action. A similar result has been observed in patients with rheumatoid arthritis, vaccinated for influenza, thus suggesting that these post-vaccine kinetics of putative regulatory T cells in immune-mediated inflammatory diseases may act as a regulatory mechanism against possible vaccine-induced lymphocyte polyclonal activation [199]. Massimo Fiorilli started to work in Fernando Aiuti's Laboratory already as a pre-graduate student and, as a full Professor of Internal Medicine, was later the successor of Fernando Aiuti in the direction of the chair of Internal Medicine, the School of Specialization in Allergy and Clinical Immunology, and the Regional Center for Primary Immunodeficiencies at Umberto Ist University Hospital and is currently retired. Marcella Visentini is a Professor of Internal Medicine and current Director of the School of Specialization in Allergy and Clinical Immunology, following the direction of Prof. Isabella Quinti.

Gianpiero D'Offizi, who graduated in 1981 from Sapienza, University of Rome, and soon after started to work in Fernando Aiuti's Laboratory and is now Director of a Division of Infectious Diseases—Hepatology at the National Institute of Infectious Diseases "Lazzaro Spallanzani" Hospital in Rome, demonstrated, with a series of co-workers in a beautiful publication, that the safety of a COVID-19 vaccine in 149 cirrhotic patients was not dissimilar from that of 149 healthcare workers, whereas immunogenicity was higher in cirrhotic patients. Male sex and previous HCV were associated with a lower anti-S immune response [200]. Thus, in these cirrhotic patients, the safety of an anti-COVID-19 mRNA high-dose has been confirmed, and immunogenicity has been surprisingly demonstrated to be higher than in healthcare workers.

Paolo Rossi and Paolo Palma, with a series of co-workers, published a very interesting and useful paper on the best methodological conditions to explore HIV reactivation by either infected peripheral blood mononuclear cells or isolated CD4⁺ T lymphocytes, stimulated *in vitro* with different activator molecules [201]. They could demonstrate that autologous plasma is preferably to be used in quantitative tests, whereas RPMI seems to be preferable in qualitative tests. Prof. Paolo Rossi is currently a full Professor of Pediatrics at

the University of Rome, Tor Vergata, and Director of the Pediatrics Department at Bambino Gesù Pediatric Hospital in Rome. Even before his graduation he had started to work with Prof. Luisa Businco, who was a Professor of Pediatrics, and Prof. Fernando Aiuti. In the period 1983–1987 he was abroad, at the Laboratory of Tumor Cell Biology in Bethesda, and at Karolinska Institutet in Stockholm, and in that period he facilitated the collaboration between Fernando Aiuti and Robert Gallo by obtaining from the latter a cellular line infected with HIV, by which the serological diagnosis of HIV infection was made possible, in the first period following the discovery of HIV as the etiologic agent of AIDS, in the absence, therefore, of commercial diagnostic kits.

Enrico Scala and Roberto Paganelli, together with some co-workers, wrote a very interesting original brief report on the relevant role of the proteomic analysis, as a complement to the IgE sensitization study, in patients with deregulated IgE [202]. Moreover, by describing four cases of different types of hyper-IgE syndrome, they report the first case of hyper-IgE syndrome associated with X chromosome microduplication. Enrico Scala worked as a post-graduate in Fernando Aiuti's laboratory for some years, is currently responsible for the Clinical and Laboratory Molecular Allergy Unit of the "Istituto Dermatologico dell'Immacolata" in Rome, and is qualified to teach Internal Medicine. Roberto Paganelli, whose detailed presentation and relationship with Fernando Aiuti is reported in an Editorial of this Special Issue [193], was a full Professor of Internal Medicine at the University "Gabriele D'Annunzio" of Chieti-Pescara and is currently teaching at UniCamilus in Rome. Enrico Scala and Roberto Paganelli, with Massimo Fiorilli and some other co-workers, published in 1998 a very interesting paper for better defining the function of the lymphocyte activation gene-3 (LAG-3) [203], a CD4-related, activation-induced cell surface molecule which has been recently identified as an immune checkpoint, thus a possible target of immune checkpoint inhibitors in cancer treatment.

Roberto Nisini took his first degree in Medicine in 1983 under the guidance of Prof. Aiuti, and then he worked as a researcher in the Italian Air Force Laboratory of Immunology organized by Raffaele D'Amelio, another student of Prof. Aiuti. He spent some time abroad in different periods, in the USA, at the National Institute of Health, Cancer Institute, in Bethesda, and at Basel Institute for Immunology and at Basel University Hospital, Centre for Biomedicine, in Switzerland. He is currently Research Director at the "Istituto Superiore di Sanità" as a Chief of the Laboratory of Immunology in the Department of Infectious Diseases. Roberto Nisini is an excellent immunologist, and in this Special Issue, he has provided a very interesting paper, together with many co-authors, including Raffaele D'Amelio, on the production of new monoclonal antibodies specific for different epitopes of the spike protein of SARS-CoV-2 and its major variants, which may represent important additional diagnostic tools for COVID-19 [204].

Andrea Picchianti Diamanti is a researcher in Rheumatology at Sapienza, University of Rome. He specialized in rheumatology under the guidance of Raffaele D'Amelio, who was then a full Professor of Internal Medicine and is currently retired, and, after the specialization and PhD in Rheumatology, he continued to work at the Sapienza University with Raffaele D'Amelio, who is, after Massimo Fiorilli, the oldest student of Prof. Fernando Aiuti, having started to work in his Laboratory in 1972, one year after his graduation. Andrea Picchianti Diamanti, with a series of co-authors, including Raffaele D'Amelio, Bruno Laganà, Professor of Internal Medicine, who worked with Fernando Aiuti for a short period and with Raffaele D'Amelio for nearly 15 years, Simonetta Salemi, who specialized with Fernando Aiuti and worked with Raffaele D'Amelio for nearly 15 years, and Roberta Di Rosa, who worked with Raffaele D'Amelio for nearly 15 years, provided an interesting paper which demonstrates that a third dose of anti-COVID-19 mRNA vaccine may safely be administered to patients with rheumatoid arthritis, considering that it does not significantly increase disease flares and adverse events [205]. Moreover, it was found that being vaccinated for influenza was inversely associated with the onset of adverse events after the second vaccine dose. The markedly decreased effectiveness after the third

vaccine dose is a probable consequence of the spreading of the Omicron variant, which largely escapes immune recognition.

Vincenzo Puro and Delia Goletti, who work at the “Lazzaro Spallanzani” National Institute for Infectious Diseases, with which Fernando Aiuti collaborated during his research activity, together with a series of co-workers, presented a paper describing the breakthrough COVID-19 infections in vaccinated healthcare workers. Breakthrough infections were observed in 42% of vaccinated subjects, independently of the levels of neutralizing antibodies and specific cellular immune response, thus confirming the lack of usefulness of post-vaccine immune monitoring to obtain insights on the possible “immune protection”, at least with monovalent vaccines containing the original Wuhan viral strain [206], considering the increasing spread of the immune evasive Omicron variant of SARS-CoV-2, and likely associated with the waning of post-booster immune response.

Alessandro Aiuti, the first son of Fernando Aiuti and a full Professor of Pediatrics at the University S. Raffaele in Milan, is one of the greatest experts in the world of gene therapy for primary immunodeficiencies, particularly in severe combined immunodeficiency for the defect of adenosine deaminase (ADA-SCID), provided, together with Maria Pia Cicalese, a talented pediatric immunologist, Assistant Professor at University Vita Salute San Raffaele, Daniele Canarutto, a brilliant physician–scientist at San Raffaele Institute for gene therapy, and other coworkers, a very interesting paper on the outcome of BCG vaccination in 12 ADA-SCID patients [207]. It has to be underlined that, considering the low absolute frequency of ADA-SCID, having collected 12 cases, all coming from outside Italy, this has only been possible because of Alessandro Aiuti being the director of a referral center for gene therapy in patients with ADA-SCID. The important message of this paper is that the necessary TB prophylaxis in patients with ADA-SCID should be conducted only after enzyme replacement therapy in order to prevent a possible disseminated post-vaccine mycobacterial infection as a consequence of the SCID. Alessandro Aiuti recently wrote a book “The Unexpected Cure” together with the science populizer Annamaria Zaccheddu, describing how the deadly HIV that his father studied and fought, after genetic engineering, became a vehicle for gene therapy for genetic disease and cancer [208].

Roberto Paganelli was a student of Fernando Aiuti, whose detailed profile has been reported in the tribute to Robert Alan Good and Fernando Aiuti he wrote in this Special Issue [193]. He with some co-workers provided a very interesting report on a case of Good Syndrome, a severe primary immunodeficiency first described by Robert Alan Good in 1954, characterized by hypogammaglobulinemia with thymoma, recurrent bacterial, viral, fungal, and parasitic infections, as well as autoimmune manifestations [209]. This hypogammaglobulinemia has a worse clinical course and prognosis than other humoral defects because it is associated with thymoma, thus including abnormalities of lymphocytes of thymic origin, able to mediate cellular immunity, then configuring a sort of combined immunodeficiency. Moreover, in this paper, an excellent, analytical review of the literature regarding this rather rare immunodeficiency has also been provided.

Ivano Mezzaroma is currently a Professor of Infectious Diseases at Sapienza, University of Rome, who since his graduation worked with Fernando Aiuti, in particular on HIV/AIDS. Based on his deep experience in HIV developed under Fernando Aiuti’s guidance, he, together with two co-authors, provided an excellent review on the multifactorial interconnection of immune activation in HIV-1 infection [210]. The chronic immune activation induced by different causes is not reduced by specific anti-viral therapy, which may block viral replication, but it is unable to induce viral eradication and to arrest the chronic immune activation with inflammation, which favors the so called “inflammaging”, able to promote the diseases of the old age, such as neurocognitive impairment, cardiovascular diseases, diabetes and metabolic syndrome, inflammatory bowel disease, bone abnormalities, and non-HIV associated cancers.

Paolo Maria Matricardi graduated in Medicine under Fernando Aiuti’s guidance and worked in his Laboratory for some time, before becoming a medical officer in the Italian Air Force and joining the Laboratory of Immunology as a military researcher in Immunology

and Allergy, which was organized by Raffaele D'Amelio. He is currently a senior scientist and private dozent at the Charité Berlin University. He provided a particularly interesting review on very low IgE producers [211], a neglected topic in the literature and a condition which may cover allergic rhinitis and may be associated with very low levels of the other Ig isotypes, recurrent airway infections, autoimmune diseases, and malignancies.

In conclusion, the enthusiastic and qualified response to the invitation to dedicate a Special Issue on biomedicines to what represented Fernando Aiuti in the landscape of clinical immunology in Italy and worldwide has shown the great vitality of his cultural legacy and attitude towards continuous innovation in research. Fernando would have been very satisfied with seeing this highly qualified response from his former collaborators.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Aiuti, F.; Wigzell, H. Function and distribution pattern of human T lymphocytes. I. Production of anti-T lymphocyte specific sera as estimated by cytotoxicity and elimination of function of lymphocytes. *Clin. Exp. Immunol.* **1973**, *13*, 171–181.
2. Aiuti, F.; Wigzell, H. Function and distribution pattern of human T lymphocytes. II. Presence of T lymphocytes in normal humans and in humans with various immunodeficiency disorders. *Clin. Exp. Immunol.* **1973**, *13*, 183–189.
3. Aiuti, F.; Wigzell, H. A study on human T lymphocytes, their function and frequency in some diseases. *Adv. Exp. Med. Biol.* **1973**, *29*, 307–314. [[CrossRef](#)]
4. Aiuti, F.; Lacava, V.; Fiorilli, M. B lymphocytes in agammaglobulinaemia. *Lancet* **1972**, *2*, 761. [[CrossRef](#)]
5. Aiuti, F.; Fontana, L. Biosynthesis in vitro of immunoglobulins in primary immunological deficiencies. *Acta Haematol.* **1972**, *48*, 129–136. [[CrossRef](#)]
6. Aiuti, F.; Fontana, L.; Gatti, R.A. Membrane-bound immunoglobulin (Ig) and in vitro production of Ig by lymphoid cells from patients with primary immunodeficiencies. *Scand. J. Immunol.* **1973**, *2*, 9–16. [[CrossRef](#)] [[PubMed](#)]
7. Aiuti, F.; Lacava, V.; Garofalo, J.A.; D'Amelio, R.; D'Asero, C. Surface markers on human lymphocytes: Studies of normal subjects and of patients with primary immunodeficiencies. *Clin. Exp. Immunol.* **1973**, *15*, 43–52. [[PubMed](#)]
8. Rezza, E.; Aiuti, F.; Businco, L.; Castello, M.A. Familial lymphopenia with T lymphocyte defect. *J. Pediatr.* **1974**, *84*, 178–182. [[CrossRef](#)]
9. Aiuti, F.; Businco, L.; Gatti, R.A. Reconstitution of T-cell disorders following thymus transplantation. *Birth Defects Orig. Artic. Ser.* **1975**, *11*, 370–376. [[PubMed](#)]
10. Businco, L.; Rezza, E.; Giunchi, G.; Aiuti, F. Thymus transplantation. Reconstitution of cellular immunity in a four-year-old patient with T-cell deficiency. *Clin. Exp. Immunol.* **1975**, *21*, 32–38.
11. Businco, L.; Aiuti, F.; Franchi, F.; Frati, C.; Cavalieri, R.; Rezza, E. Clinical and immunological improvement in a patient with chronic mucocutaneous candidiasis treated with transfer factor. *Allergol. Immunopathol.* **1976**, *4*, 345–350.
12. Calvani, M.; Franchi, F.; Aiuti, F. Letter: Severe combined immuno-deficiency and trisomy D. *Arch. Dis. Child.* **1976**, *51*, 485. [[CrossRef](#)]
13. Fiorilli, M.; Aiuti, F.; Ammirati, P.; Luzi, G.; Schirmacher, V. Effect of thymic factor on human lymphoid cells of umbilical cord blood and of children with T cell deficiency. *Int. Arch. Allergy Appl. Immunol.* **1977**, *53*, 242–246. [[CrossRef](#)]
14. Aiuti, F.; Businco, L.; Griscelli, C.; Touraine, J.; Webster, A.D. Improvements in methods for identifying patients with severe combined immunodeficiency and related syndromes. *Z. Immunitätsforsch. Immunobiol.* **1977**, *153*, 95–106. [[CrossRef](#)]
15. Carapella-de Luca, E.; Aiuti, F.; Lucarelli, P.; Bruni, L.; Baroni, C.D.; Imperato, C.; Roos, D.; Astaldi, A. A patient with nucleoside phosphorylase deficiency, selective t-cell deficiency, and autoimmune hemolytic anemia. *J. Pediatr.* **1978**, *93*, 1000–1003. [[CrossRef](#)]
16. Aiuti, F.; Businco, L.; Fiorilli, M.; De Martino, M.; Vierucci, A. Fetal liver transplantation in two infants with severe combined immunodeficiency. *Transplant. Proc.* **1979**, *11*, 230–234.
17. Sirianni, M.C.; Pandolfi, F.; Aiuti, F.; Wigzell, H. Protein A-positive staphylococci serve as a selective B cell mitogen for lymphocytes from primary immunodeficiency patients. *Clin. Exp. Immunol.* **1979**, *36*, 107–111.
18. Aiuti, F.; Ammirati, P.; Fiorilli, M.; D'Amelio, R.; Franchi, F.; Calvani, M.; Businco, L. Immunologic and clinical investigation on a bovine thymic extract. Therapeutic applications in primary immunodeficiencies. *Pediatr. Res.* **1979**, *13*, 797–802. [[CrossRef](#)]
19. Aiuti, F.; Valesini, G.; D'Amelio, R.; Luzi, G.; Palmisano, L.; Giunchi, G. IgA deficiency and circulating immune complexes in Neapolitan children with fatal acute respiratory infections. *Lancet* **1980**, *1*, 226–228. [[CrossRef](#)] [[PubMed](#)]
20. D'Amelio, R.; Le Moli, S.; Rossi, P.; Aiuti, F. Neutrophil chemotaxis defect in IgA deficiency evaluated by migration agarose method. *Scand. J. Immunol.* **1980**, *11*, 471–477. [[CrossRef](#)] [[PubMed](#)]
21. D'Amelio, R.; Rossi, P.; Le Moli, S.; Aiuti, F. Defective neutrophil chemotaxis in hypogammaglobulinemia and selective IgA deficiency. *Clin. Immunol. Immunopathol.* **1980**, *16*, 287–296. [[CrossRef](#)] [[PubMed](#)]
22. Sirianni, M.C.; Pucillo, L.P.; Fiorilli, M.; Aiuti, F.; Banck, G.; Forsgren, A. Formalin-treated bacteria as selective B cell mitogens: Results in primary and acquired immunodeficiencies. *Clin. Exp. Immunol.* **1981**, *45*, 393–398. [[PubMed](#)]

23. Sirianni, M.C.; Fiorilli, M.; Pandolfi, F.; Quinti, I.; Aiuti, F. Natural killer activity and lymphocyte subpopulations in patients with primary humoral and cellular immunodeficiencies. *Clin. Immunol. Immunopathol.* **1981**, *21*, 12–19. [[CrossRef](#)]
24. Pandolfi, F.; Quinti, I.; Sirianni, M.C.; Fiorilli, M.; Zolla, S.; Aiuti, F. Imbalances of T cell subpopulations in primary immunodeficiencies and systemic lupus erythematosus. *Int. Arch. Allergy Appl. Immunol.* **1981**, *65*, 399–409. [[CrossRef](#)] [[PubMed](#)]
25. Businco, L.; Pandolfi, F.; Rossi, P.; Del Principe, D.; Fiorilli, M.; Quinti, I.; Aiuti, F. Selective defect of a T helper subpopulation in severe combined immunodeficiency. *J. Clin. Immunol.* **1981**, *1*, 125–130. [[CrossRef](#)]
26. Fiorilli, M.; Sirianni, M.C.; Pandolfi, F.; Quinti, I.; Tosti, U.; Aiuti, F.; Goldstein, G. Improvement of natural killer activity and of T cells after thymopoietin pentapeptide therapy in a patient with severe combined immunodeficiency. *Clin. Exp. Immunol.* **1981**, *45*, 344–351. [[PubMed](#)]
27. Pandolfi, F.; Quinti, I.; Frielingsdorf, A.; Goldstein, G.; Businco, L.; Aiuti, F. Abnormalities of regulatory T-cell subpopulations in patients with primary immunoglobulin deficiencies. *Clin. Immunol. Immunopathol.* **1982**, *22*, 323–330. [[CrossRef](#)]
28. Aiuti, F.; Pandolfi, F. The role of T lymphocytes in the pathogenesis of primary immunodeficiencies. *Thymus* **1982**, *4*, 257–264.
29. Aiuti, F.; Pandolfi, F.; Fiorilli, M.; Bonomo, R.; Quinti, I.; Frielingsdorf, A.; Luzi, G. Monoclonal antibody analysis of T cell subsets in 40 patients with immunodeficiencies. *J. Clin. Immunol.* **1982**, *2* (Suppl. S3), 81S–89S.
30. D’Amelio, R.; Palmisano, L.; Le Moli, S.; Seminara, R.; Aiuti, F. Serum and salivary IgA levels in normal subjects: Comparison between tonsillectomized and non-tonsillectomized subjects. *Int. Arch. Allergy Appl. Immunol.* **1982**, *68*, 256–259. [[CrossRef](#)]
31. Paganelli, R.; Aiuti, F.; Beverley, P.C.; Levinsky, R.J. Impaired production of interleukins in patients with cell-mediated immunodeficiencies. *Clin. Exp. Immunol.* **1983**, *51*, 338–344.
32. Fiorilli, M.; Businco, L.; Pandolfi, F.; Paganelli, R.; Russo, G.; Aiuti, F. Heterogeneity of immunological abnormalities in ataxia-telangiectasia. *J. Clin. Immunol.* **1983**, *3*, 135–141. [[CrossRef](#)]
33. Pandolfi, F.; Corte, G.; Quinti, I.; Fiorilli, M.; Frielingsdorf, A.; Bargellesi, A.; Aiuti, F. Defect of T helper lymphocytes, as identified by the 5/9 monoclonal antibody, in patients with common variable hypogammaglobulinaemia. *Clin. Exp. Immunol.* **1983**, *51*, 470–474.
34. Businco, L.; Rossi, P.; Paganelli, R.; Seminara, R.; Aiuti, F. Immunologic reconstitution with bone marrow transplantation and thymic hormones in two patients with severe pure T-cell defects. *Birth Defects Orig. Artic. Ser.* **1983**, *19*, 281–285.
35. Aiuti, F.; Businco, L.; Fiorilli, M.; Galli, E.; Quinti, I.; Le Moli, S.; Seminara, R.; Goldstein, G. Therapy with thymopoietin pentapeptide (TP-5) in 26 patients with primary immunodeficiencies. *Birth Defects Orig. Artic. Ser.* **1983**, *19*, 267–272.
36. Fiorilli, M.; Sirianni, M.C.; Sorrentino, V.; Testi, R.; Aiuti, F. In vitro enhancement of bone marrow natural killer cells after incubation with thymopoietin 32–36 (TP-5). *Thymus* **1983**, *5*, 375–382.
37. Aiuti, F.; Quinti, I.; Seminara, R.; Sirianni, M.C.; Vierucci, A.; Abo, T.; Cooper, M.D. Usefulness of monoclonal antibodies in the diagnosis and monitoring of patients with primary immunodeficiencies: Combined experience in three clinical immunology centers. *Diagn. Immunol.* **1983**, *1*, 188–194.
38. Aiuti, F.; Businco, L.; Fiorilli, M.; Galli, E.; Quinti, I.; Rossi, P.; Seminara, R.; Goldstein, G. Thymopoietin pentapeptide treatment of primary immunodeficiencies. *Lancet* **1983**, *1*, 551–554. [[CrossRef](#)]
39. Sirianni, M.C.; Businco, L.; Seminara, R.; Aiuti, F. Severe combined immunodeficiencies, primary T-cell defects and DiGeorge syndrome in humans: Characterization by monoclonal antibodies and natural killer cell activity. *Clin. Immunol. Immunopathol.* **1983**, *28*, 361–370. [[CrossRef](#)]
40. Matricardi, P.M.; Capobianchi, M.R.; Paganelli, R.; Facchini, J.; Sirianni, M.C.; Seminara, R.; Dianzani, F.; Aiuti, F. Interferon production in primary immunodeficiencies. *J. Clin. Immunol.* **1984**, *4*, 388–394. [[CrossRef](#)]
41. Paganelli, R.; Capobianchi, M.R.; Matricardi, P.M.; Cioè, L.; Seminara, R.; Dianzani, F.; Aiuti, F. Defective interferon-gamma production in ataxia-telangiectasia. *Clin. Immunol. Immunopathol.* **1984**, *32*, 387–391. [[CrossRef](#)] [[PubMed](#)]
42. Aiuti, F.; Sirianni, M.C.; Fiorilli, M.; Paganelli, R.; Stella, A.; Turbessi, G. A placebo-controlled trial of thymic hormone treatment of recurrent herpes simplex labialis infection in immunodeficient host: Results after a 1-year follow-up. *Clin. Immunol. Immunopathol.* **1984**, *30*, 11–18. [[CrossRef](#)] [[PubMed](#)]
43. Businco, L.; Rossi, P.; Paganelli, R.; Galli, E.; DiGilio, G.; Lulli, P.; Aiuti, F. Bone marrow transplantation and thymopoietin pentapeptide treatment in two infants with immunodeficiency with predominant T-cell defects. *Clin. Immunol. Immunopathol.* **1984**, *33*, 123–130. [[CrossRef](#)] [[PubMed](#)]
44. Fiorilli, M.; Carbonari, M.; Crescenzi, M.; Russo, G.; Aiuti, F. T-cell receptor genes and ataxia telangiectasia. *Nature* **1985**, *313*, 186. [[CrossRef](#)] [[PubMed](#)]
45. Fiorilli, M.; Quinti, I.; Russi, G.; Seminara, R.; Ensoli, B.; Aiuti, F. Thymopentin treatment of selective IgA deficiency. *Surv. Immunol. Res.* **1985**, *4* (Suppl. S1), 129–134. [[CrossRef](#)] [[PubMed](#)]
46. Businco, L.; Rubaltelli, F.F.; Paganelli, R.; Galli, E.; Ensoli, B.; Betti, P.; Aiuti, F. Results in two infants with the DiGeorge syndrome—Effects of long-term TP5. *Clin. Immunol. Immunopathol.* **1986**, *39*, 222–230. [[CrossRef](#)]
47. Fiorilli, M.; Russo, G.; Paganelli, R.; Papetti, C.; Carbonari, M.; Crescenzi, M.; Calvani, M.; Quinti, I.; Aiuti, F. Hypogammaglobulinemia with hyper-IgM, severe T-cell defect, and abnormal recirculation of OKT4 lymphocytes in a girl with chronic lymphadenopathy. *Clin. Immunol. Immunopathol.* **1986**, *38*, 256–264. [[CrossRef](#)]
48. Aiuti, F.; Luzi, G. Clinical immunology of immunodeficiency diseases symptoms and signs of primary immunodeficiencies. *Ann. Clin. Res.* **1987**, *19*, 230–247.

49. Paganelli, R.; Capobianchi, M.R.; Ensoli, B.; D'Offizi, G.P.; Facchini, J.; Dianzani, F.; Aiuti, F. Evidence that defective gamma interferon production in patients with primary immunodeficiencies is due to intrinsic incompetence of lymphocytes. *Clin. Exp. Immunol.* **1988**, *72*, 124–129.
50. Quinti, I.; Paganelli, R.; Scala, E.; Guerra, E.; Mezzaroma, I.; D'Offizi, G.P.; Aiuti, F. Hepatitis C virus antibodies in gammaglobulin. *Lancet* **1990**, *336*, 1377. [[CrossRef](#)]
51. Paganelli, R.; Scala, E.; Scarselli, E.; Ortolani, C.; Cossarizza, A.; Carmini, D.; Aiuti, F.; Fiorilli, M. Selective deficiency of CD4+/CD45RA+ lymphocytes in patients with ataxia-telangiectasia. *J. Clin. Immunol.* **1992**, *12*, 84–91. [[CrossRef](#)] [[PubMed](#)]
52. Pandolfi, F.; Paganelli, R.; Cafaro, A.; Oliva, A.; Giovannetti, A.; Scala, E.; Quinti, I.; Aiuti, F. Abnormalities of lymphocyte subpopulations in CVI do not correlate with increased production of IL-6. *Immunodeficiency* **1993**, *4*, 19–23. [[PubMed](#)]
53. Pandolfi, F.; Paganelli, R.; Oliva, A.; Quinti, I.; Polidori, V.; Fanales-Belasio, E.; Guerra, E.; Aiuti, F. Increased IL-6 gene expression and production in patients with common variable immunodeficiency. *Clin. Exp. Immunol.* **1993**, *92*, 239–244. [[CrossRef](#)] [[PubMed](#)]
54. Quinti, I.; Sacco, G.; el Salman, D.; Paganelli, R.; Fiorilli, M.; Aiuti, F.; Pandolfi, F. Infection with hepatitis C virus. Intravenous gammaglobulin may still infect patients. *Br. Med. J.* **1994**, *308*, 856. [[CrossRef](#)] [[PubMed](#)]
55. Taliani, G.; Guerra, E.; Rosso, R.; Badolato, M.C.; Luzi, G.; Sacco, G.; Lecce, R.; De Bac, C.; Aiuti, F. Hepatitis C virus infection in hypogammaglobulinemic patients receiving long-term replacement therapy with intravenous immunoglobulin. *Transfusion* **1995**, *35*, 103–107. [[CrossRef](#)]
56. Quinti, I.; Pandolfi, F.; Paganelli, R.; Giovannetti, A.; Sacco, G.; Oliva, A.; Aiuti, F. Hepatitis C virus infection in Italian patients with hypogammaglobulinemia. *Clin. Ther.* **1996**, *18* (Suppl. B), 96–107. [[CrossRef](#)]
57. Oliva, A.; Quinti, I.; Scala, E.; Fanales-Belasio, E.; Rainaldi, L.; Pierdominici, M.; Giovannetti, A.; Paganelli, R.; Aiuti, F.; Pandolfi, F. Immunodeficiency with hyperimmunoglobulinemia M in two female patients is not associated with abnormalities of CD40 or CD40 ligand expression. *J. Allergy Clin. Immunol.* **1995**, *96*, 403–410. [[CrossRef](#)] [[PubMed](#)]
58. Quinti, I.; Giovannetti, A.; Paganelli, R.; Pucillo, L.P.; Varani, A.R.; Ricci, G.; Scala, E.; Pandolfi, F.; Casato, M.; Aiuti, F. HCV infection in a patient with hyper IgM syndrome. *J. Clin. Immunol.* **1996**, *16*, 321–325. [[CrossRef](#)]
59. Oliva, A.; Scala, E.; Quinti, I.; Paganelli, R.; Ansotegui, I.J.; Giovannetti, A.; Pierdominici, M.; Aiuti, F.; Pandolfi, F. IL-10 production and CD40L expression in patients with common variable immunodeficiency. *Scand. J. Immunol.* **1997**, *46*, 86–90. [[CrossRef](#)]
60. Zullo, A.; Romiti, A.; Rinaldi, V.; Vecchione, A.; Tomao, S.; Aiuti, F.; Frati, L.; Luzi, G. Gastric pathology in patients with common variable immunodeficiency. *Gut* **1999**, *45*, 77–81. [[CrossRef](#)]
61. Pierdominici, M.; Marziali, M.; Giovannetti, A.; Oliva, A.; Rosso, R.; Marino, B.; Digilio, M.C.; Giannotti, A.; Novelli, G.; Dallapiccola, B.; et al. T cell receptor repertoire and function in patients with DiGeorge syndrome and velocardiofacial syndrome. *Clin. Exp. Immunol.* **2000**, *121*, 127–132. [[CrossRef](#)]
62. Muscaritoli, M.; Fanfarillo, F.; Luzi, G.; Sirianni, M.C.; Iebba, F.; Laviano, A.; Russo, M.; Aiuti, F.; Rossi Fanelli, F. Impaired nutritional status in common variable immunodeficiency patients correlates with reduced levels of serum IgA and of circulating CD4+ T lymphocytes. *Eur. J. Clin. Invest.* **2001**, *31*, 544–549. [[CrossRef](#)]
63. Guazzi, V.; Aiuti, F.; Mezzaroma, I.; Mazzetta, F.; Andolfi, G.; Mortellaro, A.; Pierdominici, M.; Fantini, R.; Marziali, M.; Aiuti, A. Assessment of thymic output in common variable immunodeficiency patients by evaluation of T cell receptor excision circles. *Clin. Exp. Immunol.* **2002**, *129*, 346–353. [[CrossRef](#)]
64. Quinti, I.; Pierdominici, M.; Marziali, M.; Giovannetti, A.; Donnanno, S.; Chapel, H.; Bjorkander, J.; Aiuti, F.; European Study Group for the Surveillance of Immunoglobulin Safety. European surveillance of immunoglobulin safety—Results of initial survey of 1243 patients with primary immunodeficiencies in 16 countries. *Clin. Immunol.* **2002**, *104*, 231–236. [[CrossRef](#)]
65. Luzi, G.; Zullo, A.; Iebba, F.; Rinaldi, V.; Sanchez Mete, L.; Muscaritoli, M.; Aiuti, F. Duodenal pathology and clinical-immunological implications in common variable immunodeficiency patients. *Am. J. Gastroenterol.* **2003**, *98*, 118–121. [[CrossRef](#)]
66. Carsetti, R.; Rosado, M.M.; Donnanno, S.; Guazzi, V.; Soresina, A.; Meini, A.; Plebani, A.; Aiuti, F.; Quinti, I. The loss of IgM memory B cells correlates with clinical disease in common variable immunodeficiency. *J. Allergy Clin. Immunol.* **2005**, *115*, 412–417. [[CrossRef](#)]
67. Isgrò, A.; Sirianni, M.C.; Gramiccioni, C.; Mezzaroma, I.; Fantauzzi, A.; Aiuti, F. Idiopathic CD4+ lymphocytopenia may be due to decreased bone marrow clonogenic capability. *Int. Arch. Allergy Immunol.* **2005**, *136*, 379–384. [[CrossRef](#)]
68. Isgrò, A.; Marziali, M.; Mezzaroma, I.; Luzi, G.; Mazzone, A.M.; Guazzi, V.; Andolfi, G.; Cassani, B.; Aiuti, A.; Aiuti, F. Bone marrow clonogenic capability, cytokine production, and thymic output in patients with common variable immunodeficiency. *J. Immunol.* **2005**, *174*, 5074–5081. [[CrossRef](#)] [[PubMed](#)]
69. Sirianni, M.C.; Atzori, C.; De Santis, W.; Milito, C.; Esposito, A.; Marziali, M.; Bernardi, M.L.; Cargnel, A.; Aiuti, F. A case of *Pneumocystis jiroveci* pneumonia in X-linked agammaglobulinaemia treated with immunosuppressive therapy: A lesson for immunologists. *Int. Arch. Allergy Immunol.* **2006**, *140*, 82–88. [[CrossRef](#)] [[PubMed](#)]
70. Giovannetti, A.; Pierdominici, M.; Mazzetta, F.; Marziali, M.; Renzi, C.; Mileo, A.M.; De Felice, M.; Mora, B.; Esposito, A.; Carello, R.; et al. Unravelling the complexity of T cell abnormalities in common variable immunodeficiency. *J. Immunol.* **2007**, *178*, 3932–3943. [[CrossRef](#)] [[PubMed](#)]
71. Giovannetti, A.; Pierdominici, M.; Aiuti, F. T-cell homeostasis: The dark(ened) side of common variable immunodeficiency. *Blood* **2008**, *112*, 446. [[CrossRef](#)]

72. Paganelli, R.; Scala, E.; Mezzaroma, I.; Pinter, E.; D'Offizi, G.; Fanales-Belasio, E.; Rosso, R.M.; Ansotegui, I.J.; Pandolfi, F.; Aiuti, F. Immunologic aspects of hyperimmunoglobulinemia E-like syndrome in patients with AIDS. *J. Allergy Clin. Immunol.* **1995**, *95 Pt 1*, 995–1003. [[CrossRef](#)]
73. Sirianni, M.C.; Testi, R.; Bonomo, G.; Aiuti, F.; Morrone, A. Lack of specific cell mediated immunity to cytomegalovirus in people at risk for AIDS. *AIDS Res.* **1983**, *1*, 99–105. [[CrossRef](#)]
74. Aiuti, F.; Sirianni, M.C.; Panà, A.; Quinti, I.; Ippolito, F. Immunological and virological studies in a risk population for AIDS in Rome (Italy). *Ann. N. Y. Acad. Sci.* **1984**, *437*, 554–558. [[CrossRef](#)]
75. Lazzarin, A.; Galli, M.; Introna, M.; Negri, C.; Mantovani, A.; Mella, L.; Ferrante, P.; Parravicini, C.; Trombini, M.; Aiuti, F.; et al. Outbreak of persistent, unexplained, generalized lymphadenopathy with immunological abnormalities in drug addicts in Milan. *Infection* **1984**, *12*, 372–376. [[CrossRef](#)]
76. De Rossi, G.; Mariani, G.; Pandolfi, F.; Bonomo, G.; Franchi, A.; Pasqualetti, D.; Martelli, M.; Napolitano, M.; Aiuti, F.; Mandelli, F. Immunological abnormalities in treated hemophiliacs (an Italian study). *Haematologica* **1984**, *69*, 643–654.
77. Fiorilli, M.; Carbonari, M.; Scarpati, B.; Scano, G.; Gaetano, C.; Aiuti, F. Immunoglobulins in the acquired immunodeficiency syndrome. *Ann. Intern. Med.* **1985**, *102*, 862–863. [[CrossRef](#)]
78. Sirianni, M.C.; Rossi, P.; Scarpati, B.; Ragona, G.; Seminara, R.; Bonomo, G.; Aiuti, F. Immunological and virological investigation in patients with lymphadenopathy syndrome and in a population at risk for acquired immunodeficiency syndrome (AIDS), with particular focus on the detection of antibodies to human T-lymphotropic retroviruses (HTLV III). *J. Clin. Immunol.* **1985**, *5*, 261–268. [[CrossRef](#)] [[PubMed](#)]
79. Aiuti, F.; Rossi, P.; Sirianni, M.C.; Carbonari, M.; Popovic, M.; Sarngadharan, M.G.; Contu, L.; Moroni, M.; Romagnani, S.; Gallo, R.C. IgM and IgG antibodies to human T cell lymphotropic retrovirus (HTLV-III) in lymphadenopathy syndrome and subjects at risk for AIDS in Italy. *Br. Med. J. Clin. Res. Ed.* **1985**, *291*, 165–166. [[CrossRef](#)] [[PubMed](#)]
80. Lazzarin, A.; Galli, M.; Geroldi, D.; Zanetti, A.; Crocchiolo, P.; Aiuti, F.; Moroni, M. Epidemic of LAV/HTLV III infection in drug addicts in Milan: Serological survey and clinical follow-up. *Infection* **1985**, *13*, 216–218. [[CrossRef](#)] [[PubMed](#)]
81. Poli, G.; Introna, M.; Zanaboni, F.; Peri, G.; Carbonari, M.; Aiuti, F.; Lazzarin, A.; Moroni, M.; Mantovani, A. Natural killer cells in intravenous drug abusers with lymphadenopathy syndrome. *Clin. Exp. Immunol.* **1985**, *62*, 128–135. [[PubMed](#)]
82. Pandolfi, F.; De Rossi, G.; Mariani, G.; Carbonari, M.; Ensoli, B.; Napolitano, M.; Lopez, M.; Mandelli, F.; Aiuti, F. Impairment of cellular immunity and OKT4 lymphocytes in symptom-free hemophiliacs with antibodies to human T leukemia virus III (HTLV III). *Diagn. Immunol.* **1985**, *3*, 155–159. [[PubMed](#)]
83. Luzi, G.; Ensoli, B.; Turbessi, G.; Scarpati, B.; Aiuti, F. Transmission of HTLV-III infection by heterosexual contact. *Lancet* **1985**, *2*, 1018. [[CrossRef](#)] [[PubMed](#)]
84. Rossi, P.; Carbonari, M.; Bonomo, R.; Galli, M.; Manconi, P.E.; Scarpati, B.; Scano, G.; Gaetano, C.; Ensoli, B.; Aiuti, F. Epidemiological aspects of HTLV-III infection in Italy. *Eur. J. Epidemiol.* **1985**, *1*, 288–293. [[CrossRef](#)]
85. Fontana, L.; Sirianni, M.C.; de Sanctis, G.; Carbonari, M.; Ensoli, B.; Aiuti, F. Deficiency of natural killer activity, but not of natural killer binding, in patients with lymphadenopathy syndrome positive for antibodies to HTLV-III. *Immunobiology* **1986**, *171*, 425–435. [[CrossRef](#)] [[PubMed](#)]
86. Dolei, A.; Fattorossi, A.; D'Amelio, R.; Aiuti, F.; Dianzani, F. Direct and cell-mediated effects of interferon-alpha and -gamma on cells chronically infected with HTLV-III. *J. Interferon Res.* **1986**, *6*, 543–549. [[CrossRef](#)] [[PubMed](#)]
87. Ragona, G.; Sirianni, M.C.; Soddu, S.; Vercelli, B.; Sebastiani, G.; Piccoli, M.; Aiuti, F. Evidence for dysregulation in the control of Epstein-Barr virus latency in patients with AIDS-related complex. *Clin. Exp. Immunol.* **1986**, *66*, 17–24.
88. Gaetano, C.; Scano, G.; Carbonari, M.; Giannini, G.; Mezzaroma, I.; Aiuti, F.; Marolla, L.; Casadei, A.M.; Carapella, E. Delayed and defective anti-HIV IgM response in infants. *Lancet* **1987**, *1*, 631. [[CrossRef](#)]
89. Luzi, G.; Aiuti, F.; Rezza, G.; Greco, D. Italian HIV infection updated. *Nature* **1987**, *328*, 385–386. [[CrossRef](#)]
90. Parrinello, A.E.; Legnami, F.A.; Fiorilli, M.; Zecchinato, F.; Papetti, C.; Aiuti, F. Case report of a Burkitt-like lymphoma in a bisexual HIV-positive man. *Tumori* **1987**, *73*, 397–401. [[CrossRef](#)]
91. Aiuti, F.; Luzi, G.; Mezzaroma, I.; Scano, G.; Papetti, C. Delayed appearance of HIV infection in children. *Lancet* **1987**, *2*, 858. [[CrossRef](#)]
92. Sirianni, M.C.; Ragona, G.; Soddu, S.; Cuomo, L.; Aiuti, F. Studies on cell-mediated immune defects to Epstein-Barr virus and cytomegalovirus in HIV-related disorders. *Ann. N. Y. Acad. Sci.* **1987**, *511*, 385–389. [[CrossRef](#)]
93. Perricone, R.; Fontana, L.; de Carolis, C.; Carini, C.; Sirianni, M.C.; Aiuti, F. Evidence for activation of complement in patients with AIDS related complex (ARC) and/or lymphadenopathy syndrome (LAS). *Clin. Exp. Immunol.* **1987**, *70*, 500–507.
94. Sirianni, M.C.; Volpi, A.; Soddu, S.; Mancino, R.; Aiuti, F.; Rocchi, G. Immune response to cytomegalovirus in patients with acquired-immunodeficiency syndrome related complex (ARC) and AIDS. *Eur. J. Epidemiol.* **1987**, *3*, 439–441. [[CrossRef](#)]
95. Sirianni, M.C.; Soddu, S.; Malorni, W.; Arancia, G.; Aiuti, F. Mechanism of defective natural killer cell activity in patients with AIDS is associated with defective distribution of tubulin. *J. Immunol.* **1988**, *140*, 2565–2568. [[CrossRef](#)]
96. Sirianni, M.C.; De Sanctis, G.; Macchi, B.; Soddu, S.; Ensoli, F.; Aiuti, F.; Fontana, L. Natural killer activity from normal peripheral blood lymphocytes against a human T lymphotropic retrovirus type III (HTLV-III)-infected cell line. *Diagn. Clin. Immunol.* **1988**, *5*, 297–303. [[PubMed](#)]

97. Ebbesen, P.; Melbye, M.; Suni, J.; Krueger, G.R.; Füst, G.; Nagy, K.; Horvath, A.; Ujhelyi, E.; Briem, H.; Aiuti, F.; et al. Diffusion of HIV-1 virus into non-habitual categories at risk in European countries. *Eur. J. Cancer Clin. Oncol.* **1988**, *24*, 1677–1679. [[CrossRef](#)] [[PubMed](#)]
98. Aiuti, F.; Sirianni, M.C.; Mezzaroma, I.; D’Offizi, G.P.; Pesce, A.M.; Papetti, C.; Ensoli, F.; Luzi, G. HIV-1 infection: Epidemiological features and immunological alterations during the natural history of the disease. *Clin. Immunol. Immunopathol.* **1989**, *50 Pt 2*, S157–S165. [[CrossRef](#)] [[PubMed](#)]
99. Pezzi, P.P.; Tamburi, S.; D’Offizi, G.P.; Mezzaroma, I.; Aiuti, F. Retinal cotton-wool-like spots: A marker for AIDS? *Ann. Ophthalmol.* **1989**, *21*, 31–33. [[PubMed](#)]
100. Rezza, G.; Lazzarin, A.; Angarano, G.; Sinicco, A.; Pristerà, R.; Ortona, L.; Barbanera, M.; Salassa, B.; Tirelli, U.; Aiuti, F.; et al. Risk of developing AIDS in newly seropositive intravenous drug abusers. *J. Infect. Dis.* **1989**, *159*, 1156. [[CrossRef](#)] [[PubMed](#)]
101. Carbonari, M.; Fiorilli, M.; Mezzaroma, I.; Cherchi, M.; Aiuti, F. CD4 as the receptor for retroviruses of the HTLV family: Immunopathogenetic implications. *Adv. Exp. Med. Biol.* **1989**, *257*, 3–7. [[CrossRef](#)] [[PubMed](#)]
102. Rezza, G.; Lazzarin, A.; Angarano, G.; Zerboni, R.; Sinicco, A.; Salassa, B.; Pristerà, R.; Barbanera, M.; Ortona, L.; Aiuti, F.; et al. Risk of AIDS in HIV seroconverters: A comparison between intravenous drug users and homosexual males. *Eur. J. Epidemiol.* **1990**, *6*, 99–101. [[CrossRef](#)] [[PubMed](#)]
103. Sirianni, M.C.; Tagliaferri, F.; Aiuti, F. Pathogenesis of the natural killer cell deficiency in AIDS. *Immunol. Today* **1990**, *11*, 81–82. [[CrossRef](#)] [[PubMed](#)]
104. Ensoli, F.; Fiorelli, V.; Mezzaroma, I.; D’Offizi, G.P.; Aiuti, F. Proviral sequences detection of human immunodeficiency virus in seronegative subjects by polymerase chain reaction. *Mol. Cell. Probes* **1990**, *4*, 153–161. [[CrossRef](#)] [[PubMed](#)]
105. Cooper, D.A.; Pedersen, C.; Aiuti, F.; Vilde, J.L.; Ruhnke, M.; Pehrson, P.O.; Clumeck, N.; Farthing, C.; Lüthy, R.; Doherty, R.R.; et al. The efficacy and safety of zidovudine with or without acyclovir in the treatment of patients with AIDS-related complex. The European-Australian Collaborative Group. *AIDS* **1991**, *5*, 933–943. [[CrossRef](#)] [[PubMed](#)]
106. Paganelli, R.; Fanales-Belasio, E.; Scala, E.; Carmini, D.; Mezzaroma, I.; Pinter, E.; Aiuti, F. Serum eosinophil cationic protein (ECP) in human immunodeficiency virus (HIV) infection. *J. Allergy Clin. Immunol.* **1991**, *88 Pt 1*, 416–418. [[CrossRef](#)] [[PubMed](#)]
107. Quinti, I.; Palma, C.; Guerra, E.C.; Gomez, M.J.; Mezzaroma, I.; Aiuti, F.; Cassone, A. Proliferative and cytotoxic responses to mannoproteins of *Candida albicans* by peripheral blood lymphocytes of HIV-infected subjects. *Clin. Exp. Immunol.* **1991**, *85*, 485–492. [[CrossRef](#)] [[PubMed](#)]
108. Mezzaroma, I.; Avella, A.; Paganelli, R.; Ensoli, B.; d’Offizi, G.; Sirianni, M.C.; Luzi, G.; Valdarchi, C.; Aiuti, F. Recombinant alpha-2a interferon treatment in patients with acquired immunodeficiency syndrome (AIDS) and AIDS-related complex (ARC): Clinical and immunological evaluation. *Allergol. Immunopathol.* **1991**, *19*, 201–207.
109. Ensoli, F.; Fiorelli, V.; Mezzaroma, I.; D’Offizi, G.; Rainaldi, L.; Luzi, G.; Fiorilli, M.; Aiuti, F. Plasma viraemia in seronegative HIV-1-infected individuals. *AIDS* **1991**, *5*, 1195–1199. [[CrossRef](#)]
110. Tirelli, U.; Vaccher, E.; Lazzarin, A.; Alessi, E.; Crosato, I.; Milazzo, F.; Cargnel, A.; Greco, D.; Aiuti, F.; Moroni, M.; et al. Kaposi’s sarcoma in Italy, a country with intravenous drug users as the main group affected by HIV infection. *Antibiot. Chemother.* **1991**, *43*, 115–123. [[CrossRef](#)]
111. d’Offizi, G.; Papetti, C.; Valdarchi, C.; Pinter, E.; Rainaldi, L.; Pontesilli, O.; Ferrara, R.; Aiuti, F. Comparative specificity and sensitivity evaluation of a rapid test for the detection of anti-HIV antibodies (Test Pack). *Allergol. Immunopathol.* **1991**, *19*, 85–87.
112. Pezzotti, P.; Rezza, G.; Lazzarin, A.; Angarano, G.; Sinicco, A.; Aiuti, F.; Zerboni, R.; Salassa, B.; Gafà, S.; Pristerà, R.; et al. Influence of gender, age, and transmission category on the progression from HIV seroconversion to AIDS. *J. Acquir. Immune Defic. Syndr.* **1992**, *5*, 745–747. [[PubMed](#)]
113. D’Amelio, R.; Biselli, R.; Nisini, R.; Matricardi, P.M.; Aiuti, A.; Mezzaroma, I.; Pinter, E.; Pontesilli, O.; Aiuti, F. Spectrotype of anti-gp120 antibodies remains stable during the course of HIV disease. *J. Acquir. Immune Defic. Syndr.* **1992**, *5*, 930–935. [[PubMed](#)]
114. Chen, H.; Pesce, A.M.; Carbonari, M.; Ensoli, F.; Cherchi, M.; Campitelli, G.; Sbarigia, D.; Luzi, G.; Aiuti, F.; Fiorilli, M. Absence of antibodies to human herpesvirus-6 in patients with slowly-progressive human immunodeficiency virus type 1 infection. *Eur. J. Epidemiol.* **1992**, *8*, 217–221. [[CrossRef](#)]
115. Nigro, G.; Luzi, G.; Fridell, E.; Ferrara, M.; Pisano, P.; Gattinara, G.C.; Mezzaroma, I.; Söderlund, M.; Rasnoveanu, D.; Aiuti, F. Parvovirus infection in children with AIDS: High prevalence of B19-specific immunoglobulin M and G antibodies. *AIDS* **1992**, *6*, 679–684. [[CrossRef](#)]
116. Aiuti, F.; Pontesilli, O.; Biselli, R.; Matricardi, P.M.; Lovigu, C.; Carlesimo, M.; Nisini, R.; Mezzaroma, I.; Pinter, E.; Varani, A.R.; et al. Immune response to gp120 of HIV: Antibody spectrotype and inhibitory activity on T cell functions. *Pharmacol. Res.* **1992**, *26* (Suppl. S2), 64–65. [[CrossRef](#)]
117. Sirianni, M.C.; Pandolfi, F.; Verani, P.; Guerra, E.; Rossi, G.B.; Aiuti, F. CD4 defect without HIV in patients with opportunistic infections or Kaposi’s sarcoma. *AIDS* **1993**, *7*, 130–131. [[CrossRef](#)]
118. Solano, L.; Costa, M.; Salvati, S.; Coda, R.; Aiuti, F.; Mezzaroma, I.; Bertini, M. Psychosocial factors and clinical evolution in HIV-1 infection: A longitudinal study. *J. Psychosom. Res.* **1993**, *37*, 39–51. [[CrossRef](#)]
119. Pandolfi, F.; Oliva, A.; Sacco, G.; Polidori, V.; Liberatore, D.; Mezzaroma, I.; Giovannetti, A.; Kurnick, J.T.; Aiuti, F. Fibroblast-derived factors preserve viability in vitro of mononuclear cells isolated from subjects with HIV-1 infection. *AIDS* **1993**, *7*, 323–329. [[CrossRef](#)]

120. Dell'Anna, L.; Carbonari, M.; Cibati, M.; Aiuti, F.; Fiorilli, M. Insoluble gp120/anti-gp120 antibody complexes enhance T-cell activation. *AIDS* **1993**, *7*, 739–740. [[CrossRef](#)]
121. Cassone, A.; Palma, C.; Djeu, J.Y.; Aiuti, F.; Quinti, I. Anticandidal activity and interleukin-1 beta and interleukin-6 production by polymorphonuclear leukocytes are preserved in subjects with AIDS. *J. Clin. Microbiol.* **1993**, *31*, 1354–1357. [[CrossRef](#)]
122. Pivetti-Pezzi, P.; Tamburi, S.; Accorinti, M.; Mezzaroma, I.; Vullo, V.; Sorice, F.; Aiuti, F. Immunological and viral markers of HIV infection and retinal microangiopathy. *Eur. J. Ophthalmol.* **1993**, *3*, 138–142. [[CrossRef](#)] [[PubMed](#)]
123. Aiuti, F.; Ensoli, F.; Fiorelli, V.; Mezzaroma, I.; Pinter, E.; Guerra, E.; Varani, A.R. Silent HIV infection. *Vaccine* **1993**, *11*, 538–541. [[CrossRef](#)]
124. Paganelli, R.; Scala, E.; Ansotegui, I.J.; Mezzaroma, I.; Pinter, E.; Ferrara, R.; D'Offizi, G.P.; Aiuti, F. Hyper IgE syndrome induced by HIV infection. *Immunodeficiency* **1993**, *4*, 149–152. [[PubMed](#)]
125. Pontesilli, O.; Carlesimo, M.; Varani, A.R.; Ferrara, R.; D'Offizi, G.; Aiuti, F. In vitro lymphocyte proliferative response to HIV-1 p24 is associated with a lack of CD4+ cell decline. *AIDS Res. Hum. Retroviruses* **1994**, *10*, 113–114. [[CrossRef](#)]
126. Sirianni, M.C.; Ansotegui, I.J.; Aiuti, F.; Wigzell, H. Natural killer cell stimulatory factor (NKSF)/IL-12 and cytolytic activities of PBL/NK cells from human immunodeficiency virus type-1 infected patients. *Scand. J. Immunol.* **1994**, *40*, 83–86. [[CrossRef](#)]
127. Sirianni, M.C.; Mezzaroma, I.; Aiuti, F.; Moretta, A. Analysis of the cytolytic activity mediated by natural killer cells from acquired immunodeficiency syndrome patients in response to phytohemagglutinin or anti-CD16 monoclonal antibody. *Eur. J. Immunol.* **1994**, *24*, 1874–1878. [[CrossRef](#)]
128. Paganelli, R.; Scala, E.; Ansotegui, I.J.; Ausiello, C.M.; Halapi, E.; Fanales-Belasio, E.; D'Offizi, G.; Mezzaroma, I.; Pandolfi, F.; Fiorilli, M.; et al. CD8+ T lymphocytes provide helper activity for IgE synthesis in human immunodeficiency virus-infected patients with hyper-IgE. *J. Exp. Med.* **1995**, *181*, 423–428. [[CrossRef](#)]
129. Pontesilli, O.; Carlesimo, M.; Varani, A.R.; Ferrara, R.; Guerra, E.C.; Bernardi, M.L.; Ricci, G.; Mazzone, A.M.; D'Offizi, G.; Aiuti, F. HIV-specific lymphoproliferative responses in asymptomatic HIV-infected individuals. *Clin. Exp. Immunol.* **1995**, *100*, 419–424. [[CrossRef](#)] [[PubMed](#)]
130. Scala, E.; Bellioni, B.; Guerra, E.C.; Aiuti, F.; Paganelli, R. CD8⁺CD45RA⁺ in HIV-infected patients are predominantly CD11a^{bright}. *AIDS* **1995**, *9*, 653–654. [[CrossRef](#)]
131. Scala, E.; Ansotegui, I.J.; Bellioni, B.; Guerra, E.C.; Aiuti, F.; Paganelli, R. Expansion of CD11a^{bright} cells in CD8⁺CD45RA⁺ from HIV-infected patients: A new early marker for disease progression? *AIDS Res. Hum. Retroviruses* **1995**, *11*, 1327–1333. [[CrossRef](#)]
132. Pandolfi, F.; Pierdominici, M.; Oliva, A.; D'Offizi, G.; Mezzaroma, I.; Mollicone, B.; Giovannetti, A.; Rainaldi, L.; Quinti, I.; Aiuti, F. Apoptosis-related mortality in vitro of mononuclear cells from patients with HIV infection correlates with disease severity and progression. *J. Acquir. Immune Defic. Syndr. Hum. Retrovirol.* **1995**, *9*, 450–458. [[CrossRef](#)]
133. Nigro, G.; Luzi, G.; Krzysztofiak, A.; D'Orio, F.; Aiuti, F. Detection of IgM antibodies to human herpesvirus 6 in Romanian children with nonprogressive human immunodeficiency virus disease. *Pediatr. Infect. Dis. J.* **1995**, *14*, 891–894. [[CrossRef](#)]
134. Dondero, F.; Rossi, T.; D'Offizi, G.; Mazzilli, F.; Rosso, R.; Sarandrea, N.; Pinter, E.; Aiuti, F. Semen analysis in HIV seropositive men and in subjects at high risk for HIV infection. *Hum. Reprod.* **1996**, *11*, 765–768. [[CrossRef](#)]
135. Guerra, E.; Ricci, G.; Carlesimo, M.; Varani, A.R.; Pontesilli, O.; Scala, E.; Mezzaroma, I.; Pierdominici, M.; Pandolfi, F.; Antinori, A.; et al. Immunological aspects of patients with HIV-1 disease following immunization with recombinant gp160 (VaxSyn). *Antibiot. Chemother.* **1996**, *48*, 147–154. [[CrossRef](#)]
136. d'Arminio Monforte, A.; Musicco, M.; Galli, M.; Paga, C.; La Regina, A.; Lazzarin, A.; Angarano, G.; Milazzo, F.; Gritti, F.; Arlotti, M.; et al. Italian multicentre study of didanosine compassionate use in advanced HIV infection. Italian BMS-906 Study Group. *Eur. J. Clin. Microbiol. Infect. Dis.* **1997**, *16*, 135–142. [[CrossRef](#)]
137. Scala, E.; D'Offizi, G.; Rosso, R.; Turriziani, O.; Ferrara, R.; Mazzone, A.M.; Antonelli, G.; Aiuti, F.; Paganelli, R. C-C chemokines, IL-16, and soluble antiviral factor activity are increased in cloned T cells from subjects with long-term nonprogressive HIV infection. *J. Immunol.* **1997**, *158*, 4485–4492. [[CrossRef](#)]
138. Paganelli, R.; Scala, E.; Mazzone, A.M.; Rosso, R.; Mattiacci, G.; Dell'Anna, L.; Mezzaroma, I.; Aiuti, F. Th2-type cytokines, hypereosinophilia, and interleukin-5 in HIV disease. *Allergy* **1997**, *52*, 110–111. [[CrossRef](#)]
139. Carlesimo, M.; Pontesilli, O.; Varani, A.R.; Bernardi, M.L.; Mazzone, A.M.; Rosso, R.; Guerra, E.C.; Cassone, A.; Paganelli, R.; Aiuti, F. CD28 costimulation and T lymphocyte proliferative responses in HIV-1 infection. *Clin. Exp. Immunol.* **1997**, *109*, 406–411. [[CrossRef](#)]
140. Carlesimo, M.; Pontesilli, O.; Guerra, E.C.; Varani, A.R.; Bernardi, M.L.; Ricci, G.; Alario, C.; Pirillo, M.F.; Mattiacci, G.; Leone, P.; et al. Long-term evaluation of cellular immunity during antiretroviral therapy and immunization with human immunodeficiency virus type 1 (HIV-1) Env glycoprotein in HIV-1-infected persons. *J. Infect. Dis.* **1997**, *176*, 904–912. [[CrossRef](#)]
141. Pivetti-Pezzi, P.; Accorinti, M.; Ciapparoni, V.; Vullo, V.; Aiuti, F. Antiretroviral therapy and HIV-related retinal microangiopathy. *AIDS* **1997**, *11*, 1890–1891. [[CrossRef](#)]
142. Sirianni, M.C.; Vincenzi, L.; Fiorelli, V.; Topino, S.; Scala, E.; Uccini, S.; Angeloni, A.; Faggioni, A.; Cerimele, D.; Cottoni, F.; et al. gamma-Interferon production in peripheral blood mononuclear cells and tumor infiltrating lymphocytes from Kaposi's sarcoma patients: Correlation with the presence of human herpesvirus-8 in peripheral blood mononuclear cells and lesional macrophages. *Blood* **1998**, *91*, 968–976. [[CrossRef](#)]

143. Pontesilli, O.; Guerra, E.C.; Ammassari, A.; Tomino, C.; Carlesimo, M.; Antinori, A.; Tamburrini, E.; Prozzo, A.; Seeber, A.C.; Vella, S.; et al. Phase II controlled trial of post-exposure immunization with recombinant gp160 versus antiretroviral therapy in asymptomatic HIV-1-infected adults. VaxSyn Protocol Team. *AIDS* **1998**, *12*, 473–480. [[CrossRef](#)]
144. Pandolfi, F.; Alario, C.; Girardi, E.; Rava, L.; Ippolito, G.; Kunkl, A.; Aiuti, F. The Italian quality control study for evaluation of CD4 cells in centres involved in the treatment of HIV-1 patients. Italian CD4 Quality Control Group. *Clin. Exp. Immunol.* **1998**, *111*, 564–573. [[CrossRef](#)]
145. Pierdominici, M.; Mollicone, B.; Ricci, G.; Oliva, A.; D’Offizi, G.; Giovannetti, A.; Aiuti, F.; Pandolfi, F. Apoptosis in asymptomatic HIV-1 seropositives immunized with HIV-1 env glycoprotein (gp160): Effects of administration of Zidovudine in vivo and interleukin-2 in vitro. *Vaccine* **1998**, *16*, 715–721. [[CrossRef](#)] [[PubMed](#)]
146. Bellegrandi, S.; Rosso, R.; Mattiacci, G.; Ferrara, R.; D’Offizi, G.; Aiuti, F.; Mezzaroma, I.; Paganelli, R. Contact dermatitis in subjects infected with HIV type 1. *J. Am. Acad. Dermatol.* **1999**, *40 Pt 1*, 777–779. [[CrossRef](#)] [[PubMed](#)]
147. Ensoli, F.; Fiorelli, V.; DeCristofaro, M.; Santini Muratori, D.; Novi, A.; Vannelli, B.; Thiele, C.J.; Luzi, G.; Aiuti, F. Inflammatory cytokines and HIV-1-associated neurodegeneration: Oncostatin-M produced by mononuclear cells from HIV-1-infected individuals induces apoptosis of primary neurons. *J. Immunol.* **1999**, *162*, 6268–6277. [[CrossRef](#)]
148. Mezzaroma, I.; Carlesimo, M.; Pinter, E.; Alario, C.; Sacco, G.; Muratori, D.S.; Bernardi, M.L.; Paganelli, R.; Aiuti, F. Long-term evaluation of T-cell subsets and T-cell function after HAART in advanced stage HIV-1 disease. *AIDS* **1999**, *13*, 1187–1193. [[CrossRef](#)]
149. Rezza, G.; Andreoni, M.; Dorrucchi, M.; Pezzotti, P.; Monini, P.; Zerboni, R.; Salassa, B.; Colangeli, V.; Sarmati, L.; Nicastri, E.; et al. Human herpesvirus 8 seropositivity and risk of Kaposi’s sarcoma and other acquired immunodeficiency syndrome-related diseases. *J. Natl. Cancer Inst.* **1999**, *91*, 1468–1474. [[CrossRef](#)]
150. Froebel, K.S.; Pakker, N.G.; Aiuti, F.; Bofill, M.; Choremi-Papadopoulou, H.; Economidou, J.; Rabian, C.; Roos, M.T.; Ryder, L.P.; Miedema, F.; et al. Standardisation and quality assurance of lymphocyte proliferation assays for use in the assessment of immune function. European Concerted Action on Immunological and Virological Markers of HIV Disease Progression. *J. Immunol. Methods* **1999**, *227*, 85–97. [[CrossRef](#)]
151. Pontesilli, O.; Aiuti, F. Immunisation with gp160 in HIV-1 infection. *Lancet* **1999**, *354*, 948–949. [[CrossRef](#)]
152. Giovannetti, A.; Ensoli, F.; Mazzetta, F.; De Cristofaro, M.; Pierdominici, M.; Muratori, D.S.; Fiorelli, V.; Aiuti, F. CCR5 and CXCR4 chemokine receptor expression and beta-chemokine production during early T cell repopulation induced by highly active anti-retroviral therapy. *Clin. Exp. Immunol.* **1999**, *118*, 87–94. [[CrossRef](#)]
153. Paganelli, R.; Mezzaroma, I.; Mazzone, A.M.; Pinter, E.; Aiuti, F. Leptin levels in HIV-positive patients treated with HAART. *AIDS* **1999**, *13*, 2479. [[CrossRef](#)]
154. Isgrò, A.; De Vita, L.; Mezzaroma, I.; Aiuti, A.; Aiuti, F. Recovery of haematopoietic abnormalities in HIV-1 infected patients treated with HAART. *AIDS* **1999**, *13*, 2486–2488. [[CrossRef](#)]
155. Mezzaroma, I.; Carlesimo, M.; Pinter, E.; Muratori, D.S.; Di Sora, F.; Chiarotti, F.; Cunsolo, M.G.; Sacco, G.; Aiuti, F. Clinical and immunologic response without decrease in virus load in patients with AIDS after 24 months of highly active antiretroviral therapy. *Clin. Infect. Dis.* **1999**, *29*, 1423–1430. [[CrossRef](#)] [[PubMed](#)]
156. Mezzaroma, I.; Giovannetti, A.; Pinter, E.; Ensoli, F.; Aiuti, F. Occurrence of *Pneumocystis carinii* pneumonia in HIV-1-infected patients responding to HAART: Is prophylaxis discontinuation a safe tool? *AIDS* **1999**, *13*, 2488–2489. [[CrossRef](#)] [[PubMed](#)]
157. Dianzani, F.; Antonelli, G.; Aiuti, F.; Turriziani, O.; Riva, E.; Capobianchi, M.R.; Pandolfi, F.; D’Offizi, G. The number of HIV DNA-infected mononuclear cells is reduced under HAART plus recombinant IL-2. IRHAN Study Group. *Antivir. Res.* **2000**, *45*, 95–99. [[CrossRef](#)] [[PubMed](#)]
158. Giovannetti, A.; Pierdominici, M.; Mazzetta, F.; Mazzone, A.M.; Ricci, G.; Prozzo, A.; Pandolfi, F.; Paganelli, R.; Aiuti, F. HIV type 1-induced inhibition of CD45 tyrosine phosphatase activity correlates with disease progression and apoptosis, but not with anti-CD3-induced T cell proliferation. *AIDS Res. Hum. Retroviruses* **2000**, *16*, 211–219. [[CrossRef](#)]
159. Pandolfi, F.; Pierdominici, M.; Marziali, M.; Livia Bernardi, M.; Antonelli, G.; Galati, V.; D’Offizi, G.; Aiuti, F. Low-dose IL-2 reduces lymphocyte apoptosis and increases naïve CD4 cells in HIV-1 patients treated with HAART. *Clin. Immunol.* **2000**, *94*, 153–159. [[CrossRef](#)]
160. Ensoli, F.; Fiorelli, V.; De Cristofaro, M.; Muratori, D.S.; Novi, A.; Isgrò, A.; Aiuti, F. Role of immune-derived diffusible mediators in AIDS-associated neurological disorders. *Arch. Immunol. Ther. Exp.* **2000**, *48*, 259–266.
161. Ensoli, F.; Fiorelli, V.; Alario, C.; De Cristofaro, M.; Santini Muratori, D.; Novi, A.; Cunsolo, M.G.; Mazzetta, F.; Giovannetti, A.; Mollicone, B.; et al. Decreased T cell apoptosis and T cell recovery during highly active antiretroviral therapy (HAART). *Clin. Immunol.* **2000**, *97*, 9–20. [[CrossRef](#)] [[PubMed](#)]
162. Floridia, M.; Tomino, C.; Bucciardini, R.; Ricciardulli, D.; Fragola, V.; Pirillo, M.F.; Amici, R.; Giannini, G.; Galluzzo, C.M.; Andreotti, M.; et al. A randomized trial comparing the introduction of ritonavir or indinavir in 1251 nucleoside-experienced patients with advanced HIV infection. *AIDS Res. Hum. Retroviruses* **2000**, *16*, 1809–1820. [[CrossRef](#)] [[PubMed](#)]
163. Isgrò, A.; Mezzaroma, I.; Aiuti, A.; De Vita, L.; Franchi, F.; Pandolfi, F.; Alario, C.; Ficara, F.; Riva, E.; Antonelli, G.; et al. Recovery of hematopoietic activity in bone marrow from human immunodeficiency virus type 1-infected patients during highly active antiretroviral therapy. *AIDS Res. Hum. Retroviruses* **2000**, *16*, 1471–1479. [[CrossRef](#)] [[PubMed](#)]

164. Giovannetti, A.; Pierdominici, M.; Mazzetta, F.; Salemi, S.; Marziali, M.; Kuonen, D.; Iebba, F.; Lusi, E.A.; Cossarizza, A.; Aiuti, F. T cell responses to highly active antiretroviral therapy defined by chemokine receptors expression, cytokine production, T cell receptor repertoire and anti-HIV T-lymphocyte activity. *Clin. Exp. Immunol.* **2001**, *124*, 21–31. [[CrossRef](#)] [[PubMed](#)]
165. Propato, A.; Schiaffella, E.; Vicenzi, E.; Francavilla, V.; Baloni, L.; Paroli, M.; Finocchi, L.; Tanigaki, N.; Ghezzi, S.; Ferrara, R.; et al. Spreading of HIV-specific CD8+ T-cell repertoire in long-term nonprogressors and its role in the control of viral load and disease activity. *Hum. Immunol.* **2001**, *62*, 561–576. [[CrossRef](#)]
166. Sirianni, M.C.; Ensoli, F.; Alario, C.; Fiorelli, V.; Sacco, G.; Topino, S.; Iebba, F.; Mezzaroma, I.; Aiuti, F. Distribution of the natural killer-related receptor for HLA-C during highly active antiretroviral therapy for human immunodeficiency virus infection. *Hum. Immunol.* **2001**, *62*, 1328–1334. [[CrossRef](#)]
167. Pierdominici, M.; Giovannetti, A.; Ensoli, F.; Mazzetta, F.; Marziali, M.; De Cristofaro, M.R.; Santini-Muratori, D.; Leti, W.; Aiuti, F. Changes in CCR5 and CXCR4 expression and beta-chemokine production in HIV-1-infected patients treated with highly active antiretroviral therapy. *J. Acquir. Immune Defic. Syndr.* **2002**, *29*, 122–131. [[CrossRef](#)]
168. Ensoli, F.; Fiorelli, V.; De Cristofaro, M.; Collacchi, B.; Santini Muratori, D.; Alario, C.; Sacco, G.; Iebba, F.; Aiuti, F. Endogenous cytokine production protects T cells from spontaneous apoptosis during highly active antiretroviral therapy. *HIV Med.* **2002**, *3*, 105–117. [[CrossRef](#)]
169. Isgrò, A.; Aiuti, A.; Mezzaroma, I.; Adesso, M.; Riva, E.; Giovannetti, A.; Mazzetta, F.; Alario, C.; Mazzone, A.; Ruco, L.; et al. Improvement of interleukin 2 production, clonogenic capability and restoration of stromal cell function in human immunodeficiency virus-type-1 patients after highly active antiretroviral therapy. *Br. J. Haematol.* **2002**, *118*, 64–74. [[CrossRef](#)]
170. Isgrò, A.; Aiuti, F.; Mezzaroma, I.; Franchi, F.; Mazzone, A.M.; Iebba, F.; Aiuti, A. Interleukin 7 production by bone marrow-derived stromal cells in HIV-1-infected patients during highly active antiretroviral therapy. *AIDS* **2002**, *16*, 2231–2232. [[CrossRef](#)]
171. Giovannetti, A.; Pierdominici, M.; Marziali, M.; Mazzetta, F.; Caprini, E.; Russo, G.; Bugarini, R.; Bernardi, M.L.; Mezzaroma, I.; Aiuti, F. Persistently biased T-cell receptor repertoires in HIV-1-infected combination antiretroviral therapy-treated patients despite sustained suppression of viral replication. *J. Acquir. Immune Defic. Syndr.* **2003**, *34*, 140–154. [[CrossRef](#)] [[PubMed](#)]
172. Aiuti, F.; Giovannetti, A. Structured interruptions of therapy: Looking for the best protocol. *AIDS* **2003**, *17*, 2257–2258. [[CrossRef](#)]
173. Isgrò, A.; Mezzaroma, I.; Aiuti, A.; Fantauzzi, A.; Pinti, M.; Cossarizza, A.; Aiuti, F. Decreased apoptosis of bone marrow progenitor cells in HIV-1-infected patients during highly active antiretroviral therapy. *AIDS* **2004**, *18*, 1335–1337. [[CrossRef](#)] [[PubMed](#)]
174. Isgrò, A.; Aiuti, A.; Mezzaroma, I.; Ruco, L.; Pinti, M.; Cossarizza, A.; Aiuti, F. HIV type 1 protease inhibitors enhance bone marrow progenitor cell activity in normal subjects and in HIV type 1-infected patients. *AIDS Res. Hum. Retroviruses* **2005**, *21*, 51–57. [[CrossRef](#)] [[PubMed](#)]
175. Isgrò, A.; Aiuti, A.; Leti, W.; Gramiccioni, C.; Esposito, A.; Mezzaroma, I.; Aiuti, F. Immunodysregulation of HIV disease at bone marrow level. *Autoimmun. Rev.* **2005**, *4*, 486–490. [[CrossRef](#)] [[PubMed](#)]
176. Gold, J.; Batterham, M.J.; Rekers, H.; Harms, M.K.; Geurts, T.B.; Helmyr, P.M.; de Mendonça, J.S.; Falleiros Carvalho, L.H.; Panos, G.; Pinchera, A.; et al. Effects of nandrolone decanoate compared with placebo or testosterone on HIV-associated wasting. *HIV Med.* **2006**, *7*, 146–155. [[CrossRef](#)] [[PubMed](#)]
177. Aiuti, F.; Mezzaroma, I. Failure to reconstitute CD4+ T-cells despite suppression of HIV replication under HAART. *AIDS Rev.* **2006**, *8*, 88–97.
178. Marziali, M.; De Santis, W.; Carello, R.; Leti, W.; Esposito, A.; Isgrò, A.; Fimiani, C.; Sirianni, M.C.; Mezzaroma, I.; Aiuti, F. T-cell homeostasis alteration in HIV-1 infected subjects with low CD4 T-cell count despite undetectable virus load during HAART. *AIDS* **2006**, *20*, 2033–2041. [[CrossRef](#)]
179. Martini, F.; D’Offizi, G.; Girardi, E.; Vitale, A.; Cimini, E.; Mollicone, B.; Vlassi, C.; Aiuti, F.; Other Members of 2005 Italian CD4 Quality Control Network. The 2005 Italian Quality Control Study for the evaluation of CD4 cells in centers involved in the treatment of HIV type 1 patients. *AIDS Res. Hum. Retroviruses* **2007**, *23*, 777–781. [[CrossRef](#)]
180. Isgrò, A.; Leti, W.; De Santis, W.; Marziali, M.; Esposito, A.; Fimiani, C.; Luzi, G.; Pinti, M.; Cossarizza, A.; Aiuti, F.; et al. Altered clonogenic capability and stromal cell function characterize bone marrow of HIV-infected subjects with low CD4+ T cell counts despite viral suppression during HAART. *Clin. Infect. Dis.* **2008**, *46*, 1902–1910. [[CrossRef](#)]
181. Steigbigel, R.T.; Cooper, D.A.; Kumar, P.N.; Eron, J.E.; Schechter, M.; Markowitz, M.; Loutfy, M.R.; Lennox, J.L.; Gatell, J.M.; Rockstroh, J.K.; et al. Raltegravir with optimized background therapy for resistant HIV-1 infection. *N. Engl. J. Med.* **2008**, *359*, 339–354. [[CrossRef](#)]
182. Fätkenheuer, G.; Nelson, M.; Lazzarin, A.; Konourina, I.; Hoepelman, A.I.; Lampiris, H.; Hirschel, B.; Tebas, P.; Raffi, F.; Trottier, B.; et al. Subgroup analyses of maraviroc in previously treated R5 HIV-1 infection. *N. Engl. J. Med.* **2008**, *359*, 1442–1455. [[CrossRef](#)]
183. Gulick, R.M.; Lalezari, J.; Goodrich, J.; Clumeck, N.; DeJesus, E.; Horban, A.; Nadler, J.; Clotet, B.; Karlsson, A.; Wohlfeiler, M.; et al. Maraviroc for previously treated patients with R5 HIV-1 infection. *N. Engl. J. Med.* **2008**, *359*, 1429–1441. [[CrossRef](#)]
184. Sension, M.; Andrade Neto, J.L.; Grinsztejn, B.; Molina, J.M.; Zavala, I.; González-García, J.; Donnelly, A.; Phiri, P.; Ledesma, E.; McGrath, D.; et al. Improvement in lipid profiles in antiretroviral-experienced HIV-positive patients with hyperlipidemia after a switch to unboosted atazanavir. *J. Acquir. Immune Defic. Syndr.* **2009**, *51*, 153–162. [[CrossRef](#)]
185. INSIGHT-ESPRIT Study Group; SILCAAT Scientific Committee; Abrams, D.; Lévy, Y.; Losso, M.H.; Babiker, A.; Collins, G.; Cooper, D.A.; Darbyshire, J.; Emery, S.; et al. Interleukin-2 therapy in patients with HIV infection. *N. Engl. J. Med.* **2009**, *361*, 1548–1559. [[CrossRef](#)]

186. Steigbigel, R.T.; Cooper, D.A.; Tepler, H.; Eron, J.J.; Gatell, J.M.; Kumar, P.N.; Rockstroh, J.K.; Schechter, M.; Katlama, C.; Markowitz, M.; et al. Long-term efficacy and safety of Raltegravir combined with optimized background therapy in treatment-experienced patients with drug-resistant HIV infection: Week 96 results of the BENCHMRK 1 and 2 Phase III trials. *Clin. Infect. Dis.* **2010**, *50*, 605–612. [[CrossRef](#)]
187. Eron, J.J.; Cooper, D.A.; Steigbigel, R.T.; Clotet, B.; Gatell, J.M.; Kumar, P.N.; Rockstroh, J.K.; Schechter, M.; Markowitz, M.; Yeni, P.; et al. Efficacy and safety of raltegravir for treatment of HIV for 5 years in the BENCHMRK studies: Final results of two randomised, placebo-controlled trials. *Lancet Infect. Dis.* **2013**, *13*, 587–596. [[CrossRef](#)]
188. Mocroft, A.; Lundgren, J.D.; Ross, M.; Law, M.; Reiss, P.; Kirk, O.; Smith, C.; Wentworth, D.; Neuhaus, J.; Fux, C.A.; et al. Development and validation of a risk score for chronic kidney disease in HIV infection using prospective cohort data from the D:A:D study. *PLoS Med.* **2015**, *12*, e1001809. [[CrossRef](#)]
189. Cooper, M.D.; Peterson, R.D.; Good, R.A. Delineation of the thymic and bursal lymphoid systems in the chicken. *Nature* **1965**, *205*, 143–146. [[CrossRef](#)]
190. Jondal, M.; Holm, G.; Wigzell, H. Surface markers on human T and B lymphocytes. I. A large population of lymphocytes forming nonimmune rosettes with sheep red blood cells. *J. Exp. Med.* **1972**, *136*, 207–215. [[CrossRef](#)]
191. Luzi, G.; Businco, L.; Aiuti, F. Primary immunodeficiency syndromes in Italy: A report of the national register in children and adults. *J. Clin. Immunol.* **1983**, *3*, 316–320. [[CrossRef](#)]
192. Luzi, G.; Businco, L.; Aiuti, F. A national registry for primary immunodeficiency syndromes in Italy: A report for the period 1972–1982. *Birth Defects Orig. Artic. Ser.* **1983**, *19*, 161–163.
193. Paganelli, R. A Tribute to Two Master Teachers of Immunology. *Biomedicines* **2023**, *11*, 2178. [[CrossRef](#)]
194. Aiuti, F. *Nessuna Condanna. A Cura di Carlo Gallucci*; Sperling & Kupfer: Milano, Italy, 1993.
195. Aiuti, F. *AIDS Sapere = Vivere; A Cura dell'ANLAIDS*: Roma, Italia, 1993.
196. Aiuti, F.; Luzi, G. *Il Nostro Meraviglioso Sistema Immunitario*; Guerini e Associati: Milano, Italy, 2015.
197. Milito, C.; Cinetto, F.; Palladino, A.; Garzi, G.; Punziano, A.; Lagnese, G.; Scarpa, R.; Rattazzi, M.; Pesce, A.M.; Pulvirenti, F.; et al. Mortality in Severe Antibody Deficiencies Patients during the First Two Years of the COVID-19 Pandemic: Vaccination and Monoclonal Antibodies Efficacy. *Biomedicines* **2022**, *10*, 1026. [[CrossRef](#)]
198. La Gualana, F.; Maiorca, F.; Marrapodi, R.; Villani, F.; Miglionico, M.; Santini, S.A.; Pulcinelli, F.; Gragnani, L.; Piconese, S.; Fiorilli, M.; et al. Opposite Effects of mRNA-Based and Adenovirus-Vectored SARS-CoV-2 Vaccines on Regulatory T Cells: A Pilot Study. *Biomedicines* **2023**, *11*, 511. [[CrossRef](#)]
199. Salemi, S.; Picchianti-Diamanti, A.; Germano, V.; Donatelli, I.; Di Martino, A.; Facchini, M.; Nisini, R.; Biselli, R.; Ferlito, C.; Podestà, E.; et al. Influenza vaccine administration in rheumatoid arthritis patients under treatment with TNFalpha blockers: Safety and immunogenicity. *Clin. Immunol.* **2010**, *134*, 113–120. [[CrossRef](#)]
200. Biliotti, E.; Caioli, A.; Sorace, C.; Lionetti, R.; Milozzi, E.; Taibi, C.; Visco Comandini, U.; Maggi, F.; Puro, V.; D'Offizi, G. Humoral Immune Response after COVID-19 mRNA Vaccination in Patients with Liver Cirrhosis: A Prospective Real-Life Single Center Study. *Biomedicines* **2023**, *11*, 1320. [[CrossRef](#)]
201. Pascucci, G.R.; Morrocchi, E.; Pighi, C.; Rotili, A.; Neri, A.; Medri, C.; Olivieri, G.; Sanna, M.; Rasi, G.; Persaud, D.; et al. How CD4+ T Cells Transcriptional Profile Is Affected by Culture Conditions: Towards the Design of Optimal In Vitro HIV Reactivation Assays. *Biomedicines* **2023**, *11*, 888. [[CrossRef](#)]
202. Scala, E.; Madonna, S.; Castiglia, D.; Scala, A.; Caprini, E.; Paganelli, R. Multiplex Proteomic Evaluation in Inborn Errors with Deregulated IgE Response. *Biomedicines* **2023**, *11*, 202. [[CrossRef](#)]
203. Scala, E.; Carbonari, M.; Del Porto, P.; Cibati, M.; Tedesco, T.; Mazzone, A.M.; Paganelli, R.; Fiorilli, M. Lymphocyte activation gene-3 (LAG-3) expression and IFN-gamma production are variably coregulated in different human T lymphocyte subpopulations. *J. Immunol.* **1998**, *161*, 489–493. [[CrossRef](#)]
204. Mariotti, S.; Chiantore, M.V.; Teloni, R.; Iacobino, A.; Capocéfalo, A.; Michelini, Z.; Borghi, M.; Baggieri, M.; Marchi, A.; Bucci, P.; et al. New Monoclonal Antibodies Specific for Different Epitopes of the Spike Protein of SARS-CoV-2 and Its Major Variants: Additional Tools for a More Specific COVID-19 Diagnosis. *Biomedicines* **2023**, *11*, 610. [[CrossRef](#)]
205. Picchianti Diamanti, A.; Navarra, A.; Cuzzi, G.; Aiello, A.; Salemi, S.; Di Rosa, R.; De Lorenzo, C.; Vio, D.; Sebastiani, G.; Ferraioli, M.; et al. The Third Dose of BNT162b2 COVID-19 Vaccine Does Not “Boost” Disease Flares and Adverse Events in Patients with Rheumatoid Arthritis. *Biomedicines* **2023**, *11*, 687. [[CrossRef](#)]
206. Santoro, A.; Capri, A.; Petrone, D.; Colavita, F.; Meschi, S.; Matusali, G.; Mizzoni, K.; Notari, S.; Agrati, C.; Goletti, D.; et al. SARS-CoV-2 Breakthrough Infections According to the Immune Response Elicited after mRNA Third Dose Vaccination in COVID-19-Naïve Hospital Personnel. *Biomedicines* **2023**, *11*, 1247. [[CrossRef](#)]
207. Canarutto, D.; Oltolini, C.; Barzaghi, F.; Calbi, V.; Migliavacca, M.; Tucci, F.; Gallo, V.; Consiglieri, G.; Ferrua, F.; Recupero, S.; et al. Outcome of BCG Vaccination in ADA-SCID Patients: A 12-Patient Series. *Biomedicines* **2023**, *11*, 1809. [[CrossRef](#)]
208. Aiuti, A.; Zaccheddu, A. *La Cura Inaspettata. L'HIV da Peste del Secolo a Farmaco di Precisione*; Mondadori: Segrate, Italy, 2023.
209. Paganelli, R.; Di Lizia, M.; D'Urbano, M.; Gatta, A.; Paganelli, A.; Amerio, P.; Parronchi, P. Insights from a Case of Good's Syndrome (Immunodeficiency with Thymoma). *Biomedicines* **2023**, *11*, 1605. [[CrossRef](#)]

-
210. Mazzuti, L.; Turriziani, O.; Mezzaroma, I. The Many Faces of Immune Activation in HIV-1 Infection: A Multifactorial Interconnection. *Biomedicines* **2023**, *11*, 159. [[CrossRef](#)]
 211. Matricardi, P.M. The Very Low IgE Producer: Allergology, Genetics, Immunodeficiencies, and Oncology. *Biomedicines* **2023**, *11*, 1378. [[CrossRef](#)]

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.