CARL PRAUSNITZ GILES

FAMILY DOCTOR AND FATHER OF ALLERGY

By

David W Hide

PREFACE

Dr David Hide who wrote this manuscript, died in 1996 (1). It was probably written in 1993 as he quotes that it was 30 years since the death of Carl Prausnitz Giles in 1963. A shortened version was published in the Southampton Medical Journal in 1992 (2), but the full manuscript has never been published. Unfortunately the photographs he refers to in the Postscript cannot be found.

David was born and brought up in Portsmouth. He qualified in medicine at Bristol in 1961 and pursued a career in paediatrics, eventually becoming a Consultant Paediatrician at St Mary's Hospital on the Isle of Wight in the 1960's.

The Isle of Wight District Health Authority approved the establishment of a clinical allergy service at St Mary's Hospital in 1979. A small Clinical Allergy Research Unit was established in 1988 in East Cowes. Over the next few years David Hide and the staff of the unit raised the money to build a permanent unit in the grounds of St Mary's Hospital in Newport, Isle of Wight. It was opened as the David Hide Asthma and Allergy Research Centre, a registered charity, in 1995. The Library at the centre is named the Prausnitz Giles Library. David Hide died in March 1996, before the official opening of the centre by the Duchess of Gloucester in July 1996. In addition to conducting a wide-ranging research programme, the Centre also provides an allergy service for the UK National Health Service. One of the main research projects, started by David Hide is the Isle of Wight Birth Cohort Study. All children born on the island

between 1st January 1989 and 29th February 1990 were recruited at birth and monitored for the natural history of asthma and allergies. They have been followed up and tested aged one, two, four, 10 and 18 years of age. The first publication was when they 4 years old (3). At 18 years of age, 90% of the original cohort, (1,313 subjects) were contacted, information gathered and those who were able to visit the centre underwent allergy and asthma testing.

Dr Bruce Williamson who invited Carl Prausnitz-Giles to become his partner in General Practice, died in 1979 at the age of 86 years.

Dr Alan Champion, who joined Dr Giles as Partner in 1956 retired in 1995 and died in 2014. He became very interested in local history, this work being continued by his wife and available on the website, 'www.iwhistory.com'.

Dr Christopher Giles had a distinguished career as a Consultant Pathologist in Stoke-0n-Trent. He retired in 1982 and died in 2002 (4). He documented his late father's archives and is responsible for much that is recorded in this manuscript. These were given to the Wellcome Institute Library in 1977 where they can be accessed.

References

1. Brit Med J. 1996; 313:359.
2. Hide DW. Carl Prausnitz. Father of Clinical Allergy. Southampton Medical Journal 1992; 8(2).

3. Tariq SM, Matthews SM, Hakim EA, Stevens M, Arshad SH, Hide DW. The prevalence and risk factors for atopy in early childhood: a whole population birth cohort study. J Allergy Clin Immunol 1998; 101(5): 587-93.
4. BMJ.2002.324:920.

Alan M Edwards

INTRODUCTION

As the third millennium approaches there are fewer and fewer places not caught up in the stampede of technological progress. Probably there is nowhere in the British Isles that truly can claim the twentieth century has passed it by but there are a few places in which the pace of change has at least been moderated -where the flavour of an earlier time may still be tasted - and a sense of history is easy to elicit.

One such location is Bonchurch, near Ventnor on the Isle of Wight. Bonchurch has escaped the development and 'in-filling' that has taken away much of the character of many rural communities. No major road runs through it so it has not been challenged by the environmental threats of heavy traffic. A community aware that it is the temporary custodian of something irreplaceable has conserved many of the buildings erected in the nineteenth century, a time when Bonchurch was a fashionable resort for artists, writers and the royal families of Europe. The literary figures and the princes have passed away but the ambience of this small jewel remains and is the beginning and the end of the story of a most remarkable man - German at birth, British when he died, a foremost figure in medical science for the first half of his professional life and a beloved family physician in the second. That man was Professor Carl Prausnitz Giles.

CHAPTER ONE

'The prettiest place I ever did see' was the description Charles Dickens gave to Elizabeth, his wife in 1843 when writing to say he had rented a house in Bonchurch, Isle of Wight for the summer. In fact although Dickens wrote the early chapters of David Copperfield there, he tired of the Isle of Wight after a few months and returned with his family to London. The novelist apparently involved himself with his customary energy in local life during his stay. In a community of some 600 souls it is improbable that the presence of a temporary resident of such eminence would pass unnoticed - and history does record that Charles Dickens performed the opening ceremony of the new Saint Boniface School. There is no record that the paths of the great social reformer and novelist crossed those of George Giles, civil engineer, who lived with his wife and children in the village, Giles had married Elizabeth Meadows Betts in Leicester in 1841.The union lasted 36 years, until George died in 1877. It was blessed with eleven children of whom seven survived childhood.

Although George had a family home in Bonchurch his work meant that he and his family lived a peripatetic existence going where the advance of the railway through Britain and Northern Europe took them.

So it was that the third child, Edith Maria Giles, was born in Hamburg on 17th June 1846. Her father was involved in the construction of the first railway in Germany, from Bergedorf to Hamburg. He had been in Hamburg in 1842 when that city was devastated by a tremendous fire. Giles had employed his practical skills on that occasion. In an effort to prevent the progress of the flames he suggested using explosives to produce a fire-brake. The city fathers deliberated for

several days before agreeing to his destroying several streets and the Rathaus but the city was being devastated. Certain understandably apprehensive burghers misinterpreted this action and George almost lost his life at the hands of an excited populace. Eventually he was rescued by the Town Guard. Somehow the mob was placated and George Giles' heroic efforts to help save the city were rewarded with the Freedom of Hamburg. He was presented with a commemorative medallion, which had been cast from molten bell metal from city churches, a gold medal and a silver loving cup. George Giles left Hamburg in 1846 and back in England was engaged on the construction of the Great Northern Railway from Peterborough to Gainsborough. Subsequently he worked on railways in France and then on the railway between Vienna and Linz. George Giles died in 1877 but in 1992, one hundred and fifty years after the Hamburg fire, the City Fathers continue to honour the descendants of George and Elizabeth Giles.

Family records suggest that George Giles was a formidable figure keeping firm control on his large family who in their turn had distinguished and varied careers. One son built railways in Paraguay and another rose to high rank in the Royal Navy, chiefly being concerned with suppressing piracy in the South Seas. Edith spent many of her formative years in Hamburg. She was courted by Otto Prausnitz, a Physician in the Army Reserve of the King of Prussia. A marriage was agreed and the Contract of Settlement states that Otto and George Giles both contributed £2200 sterling to be invested in 4% Canadian Bonds. The wedding took place at Saint Boniface Church in

Bonchurch, Isle of Wight on the 18th May 1875. The marriage certificate describes the groom's father as a 'merchant' and the bride's father as a 'gentleman'. The family home, Westfield, in Bonchurch was an elegant house said to have been built by Queen Adelaide. George moved to the Maples in Bonchurch shortly before his death in 1877. Elizabeth continued at The Maples until she died in 1896. Two unmarried daughters remained in Bonchurch, living in The Dell. Miss Maria Grace Giles died in 1931 and Miss Elizabeth Amy Giles in 1945 aged 88 years. The Dell was acquired by a cousin, Humphrey Giles.

Otto Prausnitz was the first of four children born to Heyman and Henrietta Prausnitz. Heyman, born 1809, was one of seven children of Zacharias Gabriel Prausnitz and Sarah Hirsch. Heyman was a Jew working as a book-seller in Glogau, Silesia. Another son, Ferdinand was the grand-father of Margot Theresa Elisabeth Bruck who was born in Breslau in 1879 and destined to marry the younger of Otto and Edith's two sons, Carl born in Hamburg in 1876.

Otto's marriage on the Isle of Wight followed the rites of the Church of England and the birth certificate of his children records his religion as Christian (Lutheran).

He pursued a medical career as a Physician in the army of the King of Prussia and fought in the Austro-Prussian War of 1866 and the Franco-Prussian War of 1870-1871. Otto's many decorations including the Iron Cross, 2nd Class and the Defence Service Medal, 1st Class.

Otto and Edith's first son was born at home, Am Neuenwall 2, Hamburg, on 11th October 1876. He was baptised at a Lutheran church six weeks later on 28th November. The child was named Otto Carl Willy Prausnitz. Ten years were to elapse before a second child, also a son, was born. Edith returned to the family home in Bonchurch for the birth of Paul Hubert Prausnitz in 1886.

CHAPTER TWO

After his distinguished army career Otto continued to practise as a physician in Hamburg. This was an exciting city, aware of its historic past and looking to a future as a centre for international commerce. At the same time substantial problems of public health had yet to be overcome. Perhaps the greatest of these was the inadequacy of the water supply to the city culminating in a great cholera epidemic in 1892. More than 10,000 were affected and 5,000 citizens died whereas adjacent towns, which had installed water purification systems, suffered no deaths. In Hamburg the city fathers had agreed such a plant was necessary, but were unable to decide which type to install! No doubt these events impressed the teen-ager Carl preparing for a career in medicine. They must have influenced his choice of a specialty of microbiology and preventive medicine - and perhaps account for the limited respect for local politics he was to reveal fifty years later.

Carl attended school in Hamburg. Primary education was given at Hohere Burger-schule from Easter 1888 until Easter 1891. His leaving Certificate recorded very good in all subjects (grade *I)* except Drawing (grade 3). He studied at the Real Gymnasium des

Johanneums from the autumn of 1891 until 1894. His Arbitur, or Leaving Certificate, confirmed his intellectual promise with good or very good being recorded for all subjects except descriptive geometry, which earned only a satisfactory. In 1895 Carl moved on to the Wilhelm Gymnasium to study Latin, Greek and History and then to the Technical High School in Darmstadt where he studied Higher Mathematics, Physics, Heat and Light, Electricity and Mechanics.

He was now ready to embark upon his medical training and, as is still the custom in Germany, this was undertaken at more than one University. He spent two years at Leipzig taking the equivalent of the 1st and 2nd MB in Britain (Anatomy, Physiology, Chemistry and Botany). Again all subjects were passed at grade 1 except anatomy (good- grade 2). Carl progressed to Kiel University and spent a year studying clinical medicine and surgery before moving to Breslau in May 1899 for the final period of his training. He completed his examination before the Medical Examination Commission in Breslau on 26th February 1901. The Certificate of the Staatsexamen was endorsed 'good'. One year later he submitted himself to the University of Breslau for examination as Doctor of Medicine which was awarded with the highest commendation 'Summa cum laude' on 14th February 1902.

The Professor of Criminal Law at the University of Breslau was Felix Frederich Bruch. He had married Anna Eliza, daughter of Ferdinand Prausnitz seventh and last child of Zacharias Gabriel Prausnitz and brother of Otto Prausnitz' father Heyman. Felix and his wife Anna had two sons and a daughter, Margot Therese Elizabeth. Whether family ties or

academia brought the distant limbs of the Prausnitz lineage together is a matter of conjecture. The medical student fell in love with his distant cousin, daughter of the Professor of Criminal Law and proposed to her on the last day of the nineteenth century, December 31st 1899. As was the fashion of the time a decent period of engagement followed, allowing Carl to complete his undergraduate studies and embark on his career in medicine. Carl married his beautiful bride at a civil ceremony in Breslau on September 3rd 1903 and in Bernhardin-Kirche in that city on the following day. Sadly neither Carl's mother nor father survived to see the happy union. Edith had died in January 1899 in Hamburg and Carl had returned with his mother's body to England for burial in the family grave at Bonchurch. Otto died in Hamburg at the end of November 1901 and was buried in Ohlsdorf Cemetery there.

CHAPTER THREE

Carl Prausnitz accepted an appointment as House Surgeon at the Hamburg Masonic Hospital once he had qualified. Very soon an opportunity arose to take a research post in the same city. William Philipps Dunbar, a young physician of American parentage but trained in Germany, had been appointed as Director of the Hamburg Hygiene Institute in 1893, in the wake of the devastating cholera epidemic. Efforts were made to persuade Robert Koch to come to Hamburg but the State had to settle for a degree of supervision from the great man in Berlin.

Dunbar and the Institute made their mark and a substantial research programme was

established. Prausnitz obtained a post as assistant to Dunbar in June 1901 and remained for four years. Much of the work of the Institute was directed at the prevailing infectious diseases. He states that much of his time was spent on diagnostic work on cholera, plague, typhoid, diphtheria and tuberculosis. The first of the publications that were to continue until his death was a major review of serological methods available for identifying and classifying the organisms causing cholera. The review, some 80 pages in length, was published in Zeitshrift fur Hygiene (1903). William Dunbar had a particular interest in hay fever from which he suffered and which he considered a reaction to some toxic factor in pollen. Dunbar and his assistants carried out many experiments in which they induced the symptoms in the eye and respiratory tract of vulnerable individuals. Prausnitz, towards the end of his life, stated that he and Dunbar had been unaware of the pioneering work of Charles Blackley in Manchester, which had confirmed - the relationship between grass pollen and hay-fever. However in a paper presented by Dunbar to a Congress of the Royal Institute of Public Health held in Berlin in1912/1913 passing reference was made to Blackley's work. Prausnitz had reservations about the 'toxic' nature of grass pollen, which, in spite of his junior status, he expressed to his chief. They obviously respected each other and as both suffered from hay-fever experimented on each other. The consequences were unpredictable and sometimes nearly disastrous! Dunbar tells of ' a colleague susceptible to hay-fever who for many years assisted me in my investigations with the greatest self-denial, injected himself sub-cutaneously in the fore-arm with a solution of the grass pollen protein. Within the next half hour very severe symptoms developed in the

mucous membrane of eye, nose and mouth. He suffered from pain in the chest, expectorated tough mucous sputum and perspired profusely. Respiration was accelerated and difficult, the pulse-rate quickened, the voice hoarse. Fifty minutes later urticaria developed all over the body. The unlucky assistant was not named but could well have been Prausnitz.

Dunbar was willing to subject himself to similar risks. Carl Prausnitz describes how they were working together on a pollen antitoxin 'Pollantin' a preparation obtained by immunising horses. On one occasion Prausnitz administered an injection to the Professor who fell unconscious to the floor. He describes his anxiety and impotence 'at that time we had no adrenaline, no coramine. I just stood helplessly at his side until he recovered.' Hypersensitivity to horse-serum among a number of recipients of Pollantin caused Dunbar and Prausnitz to abandon their pioneer work on desensitising for hay-fever. Had they not, history might well have given them the honour this advance in medical practice that is accorded to Leonard Noon and John Freeman working from Sir Almroth Wright's laboratory at St. Mary's Hospital, London.

Although Carl Prausnitz was working in the Hygiene Institute he took other opportunities for post-graduate education afforded in Hamburg and attended courses in psychiatry and forensic medicine. He concluded his work with Dunbar in the spring of 1905. His Professor, Dunbar, wrote a glowing testimonial which emphasised his competence in bacteriological diagnosis and praised his contributions to medical literature. Dunbar records his especial gratitude for 'selfless co-operation when it came to the investigation of hay-fever toxin and anti-

toxin. Experiments carried out on his own person often had rather unpleasant consequences, but these never deterred him from pursuing the various problems as they arose until a solution could be found.

Professor Dunbar concludes by referring to Prausnitz' universal popularity and his own respect and esteem for him. 'He would reap a rich harvest of his intellectual ability and the love of his work'.

He moved to the Anatomy Department of the Allegmeines Krankenhaus, Epindorf, Hamburg, which was directed by another eminent medical man, Eugen Frankel. There he worked in a voluntary capacity, gaining experience of post-mortems and also undertaking some histology and bacteriology. But by now Carl was looking beyond Germany and wishing to continue his medical career in Britain.

CHAPTER FOUR

Carl had taken full advantage of growing-up in a household using both English and German. He had a facility for languages, which was to hold him in good stead in his later work on the international scene. Visits during childhood to his mother's home on the Isle of Wight where he stayed with aunts in Bonchurch assisted his bilingualism. So it was natural for him to come to London to a post at the Royal Institute of Public Health. Here Prausnitz was engaged in diagnostic work, chiefly involving diphtheria, typhoid and tuberculosis. He was also involved in examination of water. His publications in this period were concerned with disinfectants; one intriguing contribution to the first volume of the Journal of the Society for the

Destruction of Vermin was entitled ' The destruction of rats on ships'. Prausnitz played a full part in the academic work of the Royal Institute of Public Health and lectured on the Diploma of Public Health course. He was in constant demand as a translator of scientific texts and was invaluable in assisting eminent foreign scientists whose English was not as good as his own. On one notable occasion the famous Professor Paul Ehrlich was visiting London to give the prestigious Harben lecture. Ehrlich injured an eye on a shirt stud and was told he could not lecture. The great man told Prausnitz he must give the lecture for him. 'I was horrified at the idea. I was such a youngster, so inexperienced.' But Ehrlich insisted and so during the night Carl translated the talk into English and the next day delivered it. He reports that Paul Ehrlich never forgot and they remained friends until the end of Ehrlich's life. Other Harben lecturers during this period included the Nobel prize winner Metchnikoff, a giant in the history of bacteriology and immunology, who had described the phagocytic function of leucocytes in the blood and introduced the cellular theory of immunology. A lecturer to play an even more influential role in Prausnitz ' life was Richard Pfeiffer, pupil of Robert Koch, and remembered for developing immunisation against typhoid and discovering the important bacterium Haemophilus influenzae. Prausnitz' friendship with Richard Pfeiffer was to last until the latter's death in 1928. Carl took the opportunity to obtain a British medical qualification, the conjoint diploma of the Royal Colleges of Physicians and Surgeons (MRCS, LRCP). He could have had no conception of how important this would prove when he was forced to leave academic medicine

in Germany almost thirty years later. A testimonial from Ehrlich helped Prausnitz obtain a position as Assistant Bacteriologist to the Metropolitan Asylums Board in 1908. Here he was second in command at the Central Bacteriological Laboratory very much involved in practical diagnostic bacteriology. A major part of the work was to prepare the various anti-sera used in therapeutics at that time. Carl spent two years with the Asylums Board and moved with the laboratory to its new premises in Sutton, Surrey. Then came an invitation that Prausnitz found impossible to refuse. Richard Pfeiffer invited him to return to Breslau to be head of the Pasteur Department in the State Hygiene Institute which Pfeiffer directed.

Carl and Margot by now had two children. Otto Carl Felix Wilhelm had been born in Hamburg in 1904. Anna Edith was born in Button Surrey in 1906. Both were to continue the legal tradition of the Bruck family. Otto was to have a career as a barrister and Anna in due course married Arthur Wegner, Professor of Law in Breslau.

CHAPTER FIVE

Other scientific work in Europe at this time places Prausnitz' career in context. In the Mediterranean the Prince of Monaco had continued his annual practice of oceanographic cruises aboard the yacht Princess Alice II. In 1901,Portier from the Sorbonne, and, Richet, Professor of Physiology at the University of Paris, were aboard studying the Portugese man-of-war, Physalia, and its toxin. On their return to Paris they were unable to obtain Physalia and decided to study another coelenterate, Actinia sulcata, a sea-anemone which also produces a neuro-toxin. Two dogs, Galathee

and Neptune were injected with weak doses of actinotoxin. Four weeks later the dogs are described as in perfect health, cheerful, active, coat shiny. On the same day Neptune was injected with 0.12cc toxin per Kg. body weight. This immediately produced vomiting, defaecation, trembling of front legs. The dog fell on the side, lost consciousness, and in one half hour was dead. The scientists had discovered a phenomenon in which an individual, in this case a dog, had been sensitised by a foreign protein. Subsequent exposure, to a much smaller dose, rather than demonstrating any acquired immunity, produced a catastrophic allergic reaction culminating in the death of the individual. Five days later Portier and Richet presented their discovery of hypersensitivity, or anaphylaxis, at a meeting of the Societe' de Biologie in Paris. Richet, but not Portier, the first author, was later to receive a Nobel prize for these studies of anaphylaxis.

An Austrian paediatrician, Clemens von Pirquet, was working in the Children's Hospital in Vienna. Scarlet Fever was a major and sinister infection at that time with a high mortality. A colleague of von Pirquet, Moser, had introduced an anti-serum against the streptococcus, the causative organism of scarlet fever. Doses up to 200 ml were administered and von Pirquet observed that some patients receiving this developed a syndrome of systemic and local symptoms which he and a colleague, Bela Schick, called serum sickness. They described fever, skin rash, and swelling of the joints and lymph nodes. Von Pirquet found similar symptoms had been described after diphtheria and tetanus anti-sera had been introduced. He concluded that serum sickness was due to antibodies to foreign proteins

and for the first time used the term 'allergy', literally altered reactivity, to describe what he considered an immunological phenomenon. This occurred in 1906 and the same year Alfred Wolff-Eisner suggested that hay-fever might be a form of hypersensitivity or anaphylaxis in the nose. Four years later Samuel Meltzer put forward a similar proposition for the pathogenesis of asthma.

Carl Prausnitz could not fail to be aware of these important advances in a field in which he was maintaining an interest albeit secondary to his bacteriological studies. In 1910 von Pirquet spent a year in Breslau between appointments as Professor of Pediatrics at Johns Hopkins University, Maryland from 1908 and returning as Director of the University Children's Hospital in Vienna in 1911. Robin Coombs, in the First Carl Prausnitz Memorial Lecture delivered to the Collegium Internationale Allergologicum in 1972 states that Prausnitz spent a period as clinical assistant to von Pirquet and this must have been in 1910. There is no doubt that Prausnitz held von Pirquet in high regard and was honoured to be given a skin scarifier that von Pirquet had used in the tuberculin test he had devised. Prausnitz in due course passed it on to Professor Coombs who continues to treasure it. Prausnitz set about his work in Breslau with his customary diligence. His lectures to medical and dental students were well attended and he also lectured on school hygiene. He became interested in transplantable mouse tumours and drew on his experience in England to publish a critical review of the English and German approaches to isolation of infectious disease.

He was a pioneer of photo-micrography and, in 1913, demonstrated the first such

photographs taken with an oil immersion lens in Germany. These included pictures of the causative organisms of syphilis, malaria, tetanus, anthrax and diphtheria. He maintained an interest in allergic disease and in 1913 wrote, a detailed review of the existing understanding of hay-fever.

Carl Prausnitz must have been appalled when the .two countries of his kinship faced each other in the First World war. Professor Richard Pfeiffer was a Hygiene Inspector to the German Second Army and Prausnitz was initially his assistant, before being appointed Hygiene Adviser to an army corps which saw active service in France and Belgium. He was involved with housing, water supply and sewage and ran a field bacteriology laboratory. As his father before him he was decorated a number of times. However Carl's Iron Cross, Second Class was, unlike Otto's, raised to First Class. He also was awarded the Knight's Cross of the Archduke of Baden, the Hanseatic Cross awarded by the Senate of the City of Hamburg and the Cross of the Order of Hohenzollern, Third Class. A senior officer described him at the time as: very conscientious and energetic, tireless in caring for the health of troops in the trenches.

Little could have been amusing about service in the trenches but Prausnitz tells how he and Pfeiffer went to the Pasteur Institute in Lille where they believed there to be a supply of tetanus anti-serum. Lille had just been captured by the German First Army. (They belonged to the Second). On arrival at the Institute they found Calmette and Guerin being held at gunpoint. A carrier pigeon had been found on the previous day and Calmette and Guerin were suspected of

transmitting information. Prausnitz established that the pigeon was being used for the experimental work that eventually led to the discovery of the Bacille Calmette Guerin, used to immunise against tuberculosis. Prausnitz explained this to Richard Pfeiffer, who interceded with the army governor. Calmette and Guerin were released.

Otto and Anna were growing up in the family home in Breslau. A sister, Ursula, had been born in 1911 but sadly did not survive infancy. Carl and Margot were to have another son, Carl Christoph (Christopher), born in Breslau in March 1917. The Prausnitz household cannot have been an easy one. Carl's family undoubtedly took second place to his work. He was a strict disciplinarian who was very definitely head of the household. He expected to be obeyed without question, and usually was! He was an authoritarian figure, certainly in the eyes of his family. Christopher tells how he was thrashed at the age of three years for pushing a chair through a window. On a later occasion as a young boy, he had travelled on a tram in Breslau and thought he had escaped paying his fare. 'That young man has not paid' the conductor was told. The informant was his father.

CHAPTER SIX

After the war Carl Prausnitz returned to his post in Breslau and resumed his diagnostic and teaching responsibilities. His research output increased with publications on typhus, the diagnosis of syphilis, treatment of hay-fever by desensitising, the use of serum to counteract infections and into the nature of bacteriophage- an element in the blood. His most remarkable

discovery was made in 1921(1). Prausnitz was aware that a colleague, K**ü**stner had an extreme sensitivity to cooked fish. On one occasion he had developed an urticarial rash after dining in a restaurant. Küstner had eaten no fish but used

cutlery that had been washed with knives and forks used for fish. In Prausnitz' own words: 'K**ü**stner had for many years been suffering from hypersensitivity to fish; the smallest trace of fish eaten by him caused intense sickness and diarrhoea, urticaria and asthma,, one of these attacks was almost fatal. Extracts were prepared from boiled fish, which were filtered through Berkefeld filters and tested for sterility. These extracts, even in quantities corresponding to I/ 100th of a milligram and less of the original fish, when injected subcutaneously to Küstner produced the signs of an attack: by intra-cutaneous injection of minute quantities of the extract typical papules were obtained' within a few minutes which subsequently were surrounded by a halo, and disappeared after half an hour. The chemical properties of the antigen, it's heat stability, for example, were demonstrated. It 'appeared desirable, however, to find a method by which similar tests could be performed without running the risk of harming the supersensitive patient by causing a possibly dangerous attack through injection. I therefore devised the method of transferring the supersensitive substrate to a non-sensitive person; this should be done in such manner that the latter should not become permanently supersensitive, as had occurred in persons having received transfusion of blood from an asthmatic person. Therefore the serum of Küstner was injected intra-cutaneously to myself, not being fish hypersensitive, in various dilutions. The

following day fish extract was injected into exactly the same spots of the skin, as well as to spots not previously treated. A strong reaction appeared immediately afterwards, but only in the spots treated with Küstner's serum, both concentrated and diluted. It was therefore proved that his serum contained antibodies responsible for the reaction of super-sensitiveness.'

It is impossible to over-estimate the significance of this observation. Prausnitz and Küstner had demonstrated that the serum of an allergic individual contained a specific factor that, when transferred to another without that allergy, would produce the characteristic allergic response when the non-allergic individual was challenged. The factor was named reagin by Coca and Cooke but another 45 years were to elapse before the nature of reaginic antibody, responsible for most immediate allergic reactions, was determined by the Ishizakas, working in the United Staes, and independently by Bennich and Johannson in Sweden. Sadly, Carl Prausnitz had died three years before this conclusive outcome of the scientific process he had started. In the interim the Prausnitz-Küstner reaction was used widely in determining the presence of antibodies. Medical students in many countries learned how to perform the PK test, although relatively few of them might know too much of the eponymous originators of the test. Since 1966 methods have become available to measure total and specific levels of IgE in the blood so that the PK test has been relegated to history. Additionally anxieties about the transfer of viral disease such as hepatitis from individual to individual have made this form of test inadvisable. Nevertheless it was an important milestone in immunological knowledge which helped

establish the credibility of clinical allergy as an area of mainstream medicine.

Heinz Küstner later became a gynaecologist of eminence, holding the Chair of Obstetrics and Gynaecology at the University of Leipzig. Although he published numerous articles in this field, and a successful textbook which ran to ten editions, he made no contribution to immunology other than the paper with Prausnitz. Küstner died in the same year as Prausnitz, 1963. In 1917 Prausnitz had received from the Ministry of Education in Berlin the right to be called Professor. This did not necessarily mean the tenure of a Chair and in 1920 Richard Pfeiffer recommended that he be given the Chair of Social Hygiene at Breslau. The following year he was awarded the title Ausserordentlicher Professor - unfortunately neither increase in pay nor security of tenure was implied by the appointment. Carl Prausnitz was now in the most productive period of his research with more than forty scientific publications over the next fifteen years.

In 1923 the post of Medical Director of the Hygiene Institute at Greifswald became vacant and Carl Prausnitz was appointed by the Minister to the Chair of Hygiene on a locum tenens basis. The history of that Institute records that Prausnitz initiated improvements in the teaching of Hygiene. A lasting memorial to his time in Greifswald is a massive microscope bench he had installed in the microbiology laboratory. He played a prominent role in the local Medical Society as he was to twenty years Isle of Wight. He undertook important epidemiological studies of a typhoid epidemic in Anklam, a small town 30 km south of Greifswald. These led to improved standards in the dairies of Pomerania and to the introduction of compulsory notification

of enteric fever.

CHAPTER SEVEN

On April 1st 1926 Carl Prausnitz was appointed to succeed his friend and mentor, Richard Pfeiffer, as Director of the Hygiene Institute in Breslau.

He described his succession to Pfeiffer's Chair as a great and undeserved honour. There is little doubt that the promotion was appropriate and fully endorsed by Pfeiffer who continued to work in the Institute for many years. Eventually Richard Pfeiffer retired to a cottage in the Silesian mountains, continued to edit the medical journal Zentralblatt fur Bacteriologie and indulge in his love of music. Prausnitz tells that during the second world war, one day the Russians marched in, his house was requisitioned and fortunately for him a Russian major came in who was interested in music, and interested in great men, and the two became very great friends. But alas, soon after that, the Russians moved on; the Poles took over and Pfeiffer was only allowed the use of a little attic; hardly was he allowed his neighbours' and friends' occasional visits, whilst downstairs on his beloved piano on which he used to perform beautiful music, Polish officers hammered away, and so they hammered away when the old man lay dying up there'. Richard Pfeiffer received many honours including election to the Royal Society. He died at the age of 87 years, in 1945.

Prausnitz continued to produce outstanding research in a number of different

areas of bacteriology, immunology and hygiene. He inspired great devotion in his juniors and he was highly regarded as a teacher. He was by now a prominent figure on the international scene and was keenly interested in the League of Nations. In 1927 he took part in the International Conference on Hydrophobia organised by that organisation and the following year played a major role in an International Conference on the bacillus of Calmette and Guerin on which he was an authority. In 1929 he was invited to prepare a monograph on the standardization of diagnostic and therapeutic sera and vaccines. By 1930 international duties were claiming much of his time and he was sent to schools and institutes of hygiene in Britain, France, Czechoslovakia, Poland, Hungary and Yugoslavia. He was appointed Honorary Secretary of the International Conference of Directors of Schools of Hygiene.

In spite of these time- consuming commitments, Prausnitz continued to produce significant research in Breslau. He published work in this period on hay-fever, typhoid, syphilis, the nature of the bacteriophage, cholera, tuberculosis, milk hygiene and rabies. He also investigated the possibility of poisoning from carbon dioxide which had occurred in coal mines in Silesia, firstly he exposed rabbits to high concentrations of carbon dioxide and found they could survive for over an hour at a concentration of 50-55% CO_2. He then examined the effect on man (himself) of exposure to air containing up to 60% $C0_2$. He records that after 10 minutes in air with 9.5% $C0_2$ he was able to subsist, but with considerable discomfort. ‘There were no evil after-effects'. Prausnitz also experimented on the effects of electric shock, again

testing his theories on himself.

In the early 1930s Prausnitz contracted Psittacosis, parrot disease, and an account was written up in Deutsche Medizinische Wochenschrift 1932;1316-1317.

At about this time Prausnitz was invited to write a report on medical education in the German Reich. He undertook this with help from other academics. The report was subsequently published in the Quarterly Bulletin of the League of Nations. Carl Prausnitz', career was at its zenith. He was widely respected in Germany and abroad. It was anticipated that he would soon move to the premier appointment in his field in Germany, the Chair of Bacteriology and Hygiene in Berlin. But this was not to be. The first stirrings of National Socialism were appearing. Carl Prausnitz' frequent visits abroad were arousing suspicion and his supra-nationalistic approach to the problems of the world did not find favour in some intensely xenophobic minds at home. His Jewish antecedents were noted- attendance at his lectures diminished. Abroad he remained in great demand and was visiting lecturer in Athens and Madrid. In 1932 Prausnitz was invited to London to give the prestigious Heath Clarke Lectures. His subject was 'The teaching of preventive medicine in Europe'.

The National Socialists came to power in 1933. After a visit abroad Prausnitz found himself incarcerated in prison for a short period. He, and many other professional men and women at the time, realised that Germany under the Nazis offered them nothing, and abandoned their positions to move abroad. In October 1933 the Ministry of Education in Berlin granted Carl Prausnitz indefinite leave without pay; in April 1934 he was compulsorily retired

from his Chair in Breslau. Not unnaturally he had turned for sanctuary for his family and himself to his mother's home, England.

CHAPTER EIGHT

The stature of Carl Prausnitz at the time qualified him for an academic role of the first eminence but such a post was not immediately available to him. He was invited by Professor Maitland to his department in the University of Manchester and so, at the age of 56 found himself again a Research Fellow, albeit one of great distinction. He succeeded in obtaining small grants from the Medical Research Council and the Rockefeller Foundation to cover his stipend and the costs of his research. He turned his attention to the problem of asthma in cotton spinners. Fifteen years earlier Richard Pfeiffer had described Prausnitz as having ‘a complete command of method and utmost exactitude in his work'. Perhaps then it is not surprising that he should produce a paper 'Investigations on respiratory dust diseases in the operatives in the cotton industry' that has been described by Professor Robin Coombs of Cambridge as ' a model of research in clinical immunology' (2) . The investigation in Professor Maitland's Department had been initiated by the Home Office who were concerned at the ill-health, particularly respiratory disease, in card-room workers in the cotton industry. Preliminary epidemiological work into the prevalence of such problems among cotton operatives was carried out by Bradford Hill Then Bramwell and Ellis examined many cotton workers and suggested that some form of sensitisation to cotton dust was playing a role in symptomatology.

Prausnitz studied 'strippers asthma', suffered by the cotton workers, and noted the symptoms were worse when the patients were in close contact with the dust and improved when they moved away from it. The symptoms were often at their worst at the beginning of the week after a day or two away from work. The syndrome earned the name 'Monday Fever'. Prausnitz concluded that cotton dust contained a substance, or group of substances, in the protein fraction of the dust, that was responsible for the allergic reaction in the lungs. He did not consider histamine, which Maitland had found in the dust, to be the causal toxic agent.

Prausnitz' background in industrial medicine, as well as bacteriology and immunology, qualified him to investigate this major disease and offer advice on preventive measures to minimise exposure to the sensitising dust particles.

His report received wide coverage in the national press at the time. Headlines ranged from 'Cause of Stripper's Asthma' in the Manchester Guardian to a somewhat patronising 'German solves a problem of cotton mills' in the Morning Post.

During this time Carl, Margot and Christopher lived very modestly in Manchester. Carl's stipend as a Research Fellow was small and his salary from Breslau had ceased. He was invited to take the Chair of Hygiene at the University of Zurich but he had decided that the future for Margot, Christopher and himself lay in the United Kingdom. He therefore chose to make a change of direction that few medical men or women would feel able to make as they approached sixty years of age - a move from the comparative shelter of academia to the 'coal-face' of general medical practice as a rural family doctor.

CHAPTER NINE

The contrast between life in a city undergoing the first experience of man's extreme intolerance to man, now called ethnic cleansing, and into a small, out of the way, English village in the mid 1930s could not have been greater. Perhaps it is not surprising that Carl Prausnitz' desire to escape from National Socialism took him to Bonchurch. He had maintained links with his mother's home throughout his life. As a school-boy he had visited aunts and cousins living on the Isle of Wight during his holidays. There had been many opportunities to maintain these family relationships during his five years working at the Royal Institute of Public Health and for the Metropolitan Asylums Board.

Prausnitz was not the first eminent academic to continue a distinguished medical career in Ventnor. In 1866 Arthur Hill Hassall, naturalist of distinction and senior physician at the Royal Free Hospital developed a serious lung infection. Convalescence was protracted and, after making slow progress in other south coast resorts he came to Ventnor. Here he made a full recovery and on this occasion the location took the credit for nature's achievement. Hassall resolved to establish a hospital and in 1868 ' The National Cottage Hospital for Consumption and Diseases of the Chest was founded. Many eminent figures were associated with the institution including Queen Victoria and the Archbishop of York. Alfred Tennyson was one local dignitaries who donated money to the hospital. Hassall retired from the hospital in 1877 by which time 'Royal' had been added to the hospital's name. Four years earlier he had appointed Dr James Mains Williamson as Resident Medical Officer. Dr

Williamson spent four years in this post before entering general practice in Ventnor. He maintained his connection with the Royal Hospital for many years as an Honorary Surgeon and member of the Management Committee.

Carl Prausnitz used to visit the Williamson family at their home in Ventnor and was particularly friendly with a son Bruce. Bruce followed his father into general practice.

In 1935 Bruce was seeking a partner to take the place of a Dr Bassano. Prausnitz was concluding his studies in Manchester and when told by his great aunt Amy of the vacancy decided to apply. In those pre-National Health Service days it was necessary to buy ones way into general practice and Carl had to borrow a substantial sum of money to do so. In consequence he was never to be wealthy but his style of life was modest, even austere, in 1935 the family moved from Manchester to Kingseat, to be the family house and surgery, in Bonchurch. Carl fitted out the basement as a laboratory believing that he would be able to undertake various investigations, and perhaps continue his research. In the event the clinical needs of his patients precluded laboratory research although he continued to contribute to scientific knowledge from his intellect and experience until he died.

CHAPTER TEN

Carl, Margot and Christopher settled into their new life. Christopher, by now 18 wished to follow his father into medicine and went to University.

Carl applied himself to his new responsibilities as a family doctor in the only way he knew -completely. He rapidly obtained the respect of the local community although even the 'back

of the Wight' was not unaware of the storm clouds developing over Europe. As the Second World War grew closer anti- German feeling became evident and the Prausnitz' family was not spared it. On one occasion, on the tennis courts of Ventnor, a local lady declaimed in a loud voice, 'what are those Germans doing here?' If there was any conflict of loyalty the family did not show it. Carl formally added his mother's maiden name to his own, becoming Prausnitz Giles, and the family took the oath of allegiance to the British Crown. Carl joined the Local Volunteer Force, later known as the Home Guard, with the rank of Captain. One wonders how many Home Guard officers held the Iron Cross. He was immensely saddened by the fate of Germany but seldom spoke of it, even within the family.

His patients remember that he always had time for them. He never failed to respond to a request for help. Although without great wealth he rapidly recognised the plight of those less well off than himself and would arrange for sacks of coal to be delivered to old patients who he feared could not afford adequate heating f or themselves. He was generous but could be severe. He abhorred 'lead-swingers' and would tell them so. As Mrs Joan Wolfenden recalls ' if you tried to fool him, God help you'. She describes a 'Puck-like' quality with a great sense of humour.

Others describe him as 'very correct and authoritative'. He did not like to mix medicine and socialising. He is quoted as saying' I can't stand these garden parties.... Old women come up to me over strawberries and cream and ask me what to do about themselves... they don't want to pay or come to the surgery'. Quite a few medical men and women might echo such a

sentiment! He was a modest man in his lifestyle although he enjoyed the good things of life- such as the conversation and cuisine he found at the Wolfenden's home, Peacock Vane. He enjoyed gardening but had little time for it. Margot had rather more opportunity and used it. One minor difference between them was that she wanted a lawn free of daisies but Carl liked daisies. On this rare occasion he conceded the argument but generally he had his own way in family matters. Those who knew him well variously describe him as 'patriarchal', autocratic and a martinet. According to his daughter-in-law Gabrielle Giles what he said at home ' was by royal command'.

There is agreement by all in one respect- Carl's driving was erratic verging on the dangerous. It is alleged that the worthy citizens of Ventnor took evasive action when they saw the doctor's Hillman Minx approaching. On one occasion he generously offered to collect a prescription for a patient from the pharmacist's shop in Ventnor High Street. He literally mounted the pavement and drove into the shop front. On another occasion he was driving along the Undercliff 'too fast' according to Gabrielle Giles. There was a bang as they passed another car. 'Shouldn't we stop?' asked his son Otto, 'certainly not, drunken fool, replied Carl. When they arrived home they noticed the door handle had been knocked off the car.

Dr Giles' commitment to his patients was absolute. He would do his utmost for them and would seek specialist help whenever he deemed it necessary. On such occasions he would usually be present. His expertise in microbiology and infectious disease proved of

great advantage to many of his patients and he diagnosed leptospirosis in his own laboratory. He was much less confident of his midwifery skills. Indeed he had had little or no training in this area and preferred his partners (Dr Williamson and later Dr Alan Champion) to undertake this aspect of medical work.

Among his patients were the poet Alfred Noyes, Aubrey de Selinger and Sir Arthur Fleming. He actually called in the eminent surgeon Sir Cecil Wakeley for a second opinion for Fleming.

After the war, when much medical opinion was opposed to the National Health Service Carl Giles was arguing in favour. Two reasons he gave were 'because people who need to come to surgery will be able to- and because he would be paid'. His sense of public duty was high and he became a member of the local council. However he was frustrated at the bureaucracy of local politics and what he regarded as his own inability to respond to obvious needs of the less fortunate. He was a Rotarian and had been admitted a Freemason in 1909. In 1940 he was admitted to the Joint Yarborough and Ventnor Chapter and he became Master of the Croix Rouge in 1951.

Carl and Margot's daughter, Anna Wegner had joined. Anna, and her daughter Elizabeth, were adored by their father. Elizabeth was at school locally, and then went to Manchester University. The family was devastated in November 1947 when she was killed in an accident when crossing a road in Manchester. Christopher was continuing his medical career and had married Dr Ruth Whitley in 1942. Christopher was appointed Consultant Pathologist

in Stoke-on-Trent.

Many senior residents of Ventnor and Bonchurch retain memories of Dr Giles. One lady recalls 'my son was 12 years old when he became ill. I thought it was laziness, but then realised he was truly exhausted. I took him to Dr Giles and we had an appointment to see a specialist in Ryde Hospital. Whilst at the hospital I noticed Dr Giles wandering around and when my son was called into the surgery Dr Giles sat in on the consultation. Later on our way home with Dr Giles (he invited us to share his car) I remarked about his joining us for the appointment. He said he wanted to be there when one of his patients was being seen to know what was taking place. Richard was given the Mantoux test, which turned out to be positive. Although evening he rang the specialist to give him the result. The specialist was out to dinner with friends, but Dr Giles tracked him down and asked for advice. He then explained that the diagnosis (Tuberculosis) a short time before would have meant long months in hospital but now a new antibiotic, streptomycin, meant he could be treated at home'. He gave the first injection there and then and came to the house daily for the next 28 days to repeat the treatment. 'On the morning of our next appointment to see the specialist/at Ryde, Dr Giles (always on the ball) called and remarked that we were due at the hospital that afternoon. I said 'yes, but I had not intended going now that the illness had been diagnosed'. He took a very dim view of this, and let me know very succinctly that when a specialist was good enough to give an appointment one kept it! He arranged for a car to take Richard and his mother to Ryde. Dr Giles' willingness to serve his patients has become something of a legend in the Isle of Wight. Another former patient recalls

that her husband was dying of cancer. Dr Giles often called on Sundays and when asked if he was not off duty would reply ' I like to see my friends'. Near the end of his illness the patient had lapsed into unconsciousness. Somehow he sensed that Dr Giles was visiting 'they both simultaneously put out their hands and said 'Hello my dear old friend'.

Carl Giles was regarded with great respect by his medical colleagues on the Isle of Wight. Dr Eric Laidlaw, author of The Story of the Royal National Hospital Ventnor and former Consultant Physician at St Mary's Hospital, Newport reported:

'Dr Giles was a founder member of the Isle of Wight Medical Club. Sadly the early archives of the club are lost but the club was the first forum for post graduate education in the small medical community. Members were admitted after careful consideration by the existing membership. Meetings were formal with all present addressing each other by surnames - a practice that continued until the 1970s.'

Giles also maintained his interest in the wider world by membership of National and International societies. Coombs records that listening to him at meetings of the Collegium Allergologicum in the fifties was a wonderful experience. 'It was obvious his intellect had not slept a single wink while he was engaging in general practice'. He was extremely well read in all branches of medicine. Dr Christopher Giles tells how his father would question him closely to establish whether he was using the latest tests and techniques in the haematology laboratory he directed! If Carl was not convinced he delivered a stern rebuke.

CHAPTER ELEVEN

Carl had resolved not to return to Germany but he was persuaded to go to Berlin in 1958 to receive the Aronson award of the Robert Koch Institute. Two years later, in 1960, he accepted recognition that must have given him great satisfaction, an honorary Doctorate of Medicine from the University of Hamburg. He continued to work tirelessly for his patients in Ventnor. He always regarded himself on call and made few concessions to his advancing years. Shortly before he retired he attended an emergency on the top of Saint Boniface Down the steep hill lying to the North of Ventnor. He climbed the 750 feet, carrying his medical bag, to attend to an injured holiday-maker. He was then eighty years old.

Margot had died in 1949 but Carl was greatly comforted by the company and care of his daughter Anna. Possibly the death of Elizabeth in 1947 brought them even closer together. Anna involved herself in Ventnor society to a greater extent than Margot had found possible. She taught in the Ventnor Primary School and was a popular figure in the

community. Carl retired officially in 1960, in his 84th year, but continued to visit his patients 'my old friends' as he called them.

Although by now becoming frail his mental faculties in no way deserted him and he read all the proofs of Cell and Coombs now classic textbook 'Clinical Aspects of Immunology'. However his spirit was greatly weakened 'when Anna developed a painful malignant illness and died in March 1963. In spite of this Carl Prausnitz Giles' mind continued to seek answers to the unanswered questions. Just before he died he translated a long article by a former pupil, and dictated a letter to the British Medical Journal on the effects of hypnotism on the passive transfer of immunity.

What then is Carl Prausnitz' place in medical history? David Harley wrote 'his name is assured of an honourable place in that select band of medical immortals for the discovery of the Prausnitz-Kustner test'. That must be so, and the more than one hundred publications on many aspects of immunology, microbiology, industrial and preventive medicine, are testimony to an outstanding and innovative doctor. But Harley continues' perhaps he would have liked his epitaph to be "Here lies an old-fashioned country general practitioner who used to be a professor once-upon-a-time", for thus did he describe himself, such was the humility of the man. Christopher Giles asked his father which phase of his life had been the happiest and was rather surprised at the reply: 'Why, my life in the Isle of Wight, of course, as a general practitioner. Research and academic life I found very interesting and intensely stimulating, but I received my greatest sense of fulfilment here among my own patients. I was really cut out to be a

physician, you know, rather than a research worker,'

The consequence of that decision, to become a general practitioner, undoubtedly resulted in Carl Prausnitz Giles receiving less recognition internationally than was his due. Academic and civil honours are desirable, and many seek them strenuously and envy those to whom they are given. But such vestiges are of little worth compared with the affection and respect the patients of Dr Giles bestowed on him. For many years after his death his former patients continued to mourn his passing. This eminent academic had become the epitome of a family doctor. The stone at the head of his grave in Saint Boniface churchyard could bear no more apposite inscription 'Beloved Physician'.

References.

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POST-SCRIPT I (written by David Hide)

Although thirty years have passed since Carl Prausnitz Giles died he has not passed from the memory of many senior members of the community in Ventnor and Bonchurch.

No 11 Nuenwall , Hamburg has disappeared. Whether as a result of the action of the Royal Air Force or just to modernise the town centre I am unsure. The area is now a shopping centre. The Hamburg Hygiene Institute has moved a number of times since Dunbar and Prausnitz worked in it. Recently the Director, Professor Jochum Bockemuhl, published an account of the 100 years of the Institute which records that the original Institute was severely damaged by bombing in July 1944..

Not only the name of Breslau changed after the Second World War. Much of the records of the German city were destroyed and it has not been possible to discover whether the family house remains in the city now known as Wroclaw. The University remains and the auditorium in which Carl Prausnitz received his MD is unchanged. The laboratory where he and Küstner made their very significant discovery is still in existence as a bacteriological laboratory. The family home of George Giles, Westfield, in Bonchurch the house rented by Charles Dickens and his family is now a

Private Hotel, Winterbourne. The house from which Prausnitz Giles practised, Kingseat, is now

a guest house. Members of the Giles family continue to live on the Isle of Wight. Although none is a medical practitioner the connection with medicine remains through the

Red Cross and the Board of St Mary's NHS Trust.

Clinical allergy has remained something of a Cinderella among medical specialties in the United Kingdom. This is certainly not the situation in many parts of the world, particularly the United States which has more than 3000 board certified, or specialist, allergists.

It is difficult to understand quite why one country gives the subject such emphasis, whilst another virtually ignores it. The unfortunate consequence in Britain has been that allergic disease has been side-lined. It has been given little emphasis in undergraduate or postgraduate medical teaching and attracted relatively little funding for research. Allergy has not offered an attractive future for the academic physician. And yet there is little doubt that allergic disorders are a major cause of acute and chronic illness. Allergy is a major trigger factor for asthma and eczema- diseases which are increasing in the developed world.

A consequence of the neglect of allergy by the medical profession has been a proliferation of alternative approaches to diagnosis and management. The tragedy here is that the immunological basis for allergy has been established. The mechanism of sensitisation, antibody production, mediator release and the chronic inflammatory process that underlies the allergic reaction is increasingly understood.

A number of figures from the history of medicine have made major contributions, which should have secured allergy in the main stream of orthodox medicine. Among these one identifies the first description of anaphylaxis by Paul Portier and Charles Richet in 1902, the

introduction of the term allergy by Clemens von Pirquet in 1906, the description of serum sickness by von Pirquet and Bela Schick in the same year, and the demonstration that a serum factor responsible for the allergic reaction could be transferred from an 'allergic' to a 'non-allergic' recipient by Prausnitz and Kustner in 1921. This remarkable finding led to a long search for the reaginic antibody, culminating in the identification of Immunoglobulin E by Kimishige and Teruko Ishizaka, and separately, Johannsohn and Bennich, in 1966.

As a consultant paediatrician working on the Isle of Wight I was aware that in a substantial proportion of acute admissions to the children's ward and of the children referred to out-patients^ allergy was playing a contributory role. My enthusiasm for the subject received a substantial fillip when I learned that one of the Father figures of clinical allergy had spent the last 25 years of his life as a general practitioner on the Isle of Wight. As I learned more about Carl Prausnitz it seemed that an attempt to record the life of this remarkable man, learned academic and beloved family doctor, should be made.

I have been helped by a great many people in collecting data for this book. Members of the Giles family have been extremely tolerant of this intruder into their history. Dr Christopher

Giles has been generous with time and in allowing me access to his excellently documented family archives from which many of the illustrations have been culled.

The late Mrs Gabrielle Giles gave an insight into the personality of her father-in-law that could

only come from a member of the family.

Mr Peter Giles allowed me to see his records of the Giles family, which go back over 200 years. He kindly allowed me to use the photographs of George Giles commemorative plaque and medal and the silver loving cup presented to him by the City of Hamburg.

My interest was first aroused by Dr Alan Champion, erstwhile partner of Carl Prausnitz Giles, who has assisted with the gestation of this book. Other colleagues on the Isle of Wight whose input I acknowledge include the late Dr AK Miller FRCP, Dr Eric Laidlaw, and Dr John Harland FRCP. I have been very fortunate to receive help from the late Professor A Downie FRS, Professor Robin Coombs, Professor John Soothill and Dr AW Frankland all of whom had personal reminiscences of Carl Prausnitz.

The Director of Hamburg Hygiene Institute, Professor dr med Jochen Bockemuhl provided information on Prausnitz' work with Dunbar and provided several photographs. Professor Bockemuhl and Mr Ralph Bojar were at that time writing a History of the Hamburg Hygiene Institute which has now been published. They were unaware that Carl Prausnitz had once worked as an assistant to the Director. Dunbar apparently had rarely named his junior colleagues in his annual reports.

Professor dr med Eduard Seidler, Director of the Institut fur Geschichte der Medizin of the Albert-Ludwigs University in Freiburg kindly advised on the best means of obtaining information on events in pre-war Germany.

In Wroclaw (Breslau) I was very fortunate to meet Dr Mieczyslawa Miklaszewska, working in the Dermatology Clinic of the University of Wroclaw, who traced correspondence between Professor Prausnitz and various municipal councils on matters of hygiene.

Doctor Stefan Kubow ,Director of the Wroclaw University Library provided a photograph of the St. Mary Magdalene Church and found records of Prausnitz' University lectures and committee

membership in the University Archive.

Dr Maria Pidlypczak-Majerowicz, of the University Library in Wroclaw also helped obtain the elusive information about the city when it was part of Germany - information not easy to acquire in

Communist Poland. My very sincere thanks go to Mr Wojciech Barg, Medical Librarian

and his son Dr Barg who befriended me in Wroclaw and obtained the information and photographs of the laboratory in which Prausnitz and Kustner carried out their classic experiment. Dr Schroeder, Scientific Archivist at the Ernst Moritz Arndt University in Greifswald found records of Prausnitz' work in that city and provided the photograph of the Greifswald Hygiene Institute - now known as the Institute for Medical Microbiology.

It is something of an embarrassment to thank the former patients and friends of Dr C P Giles from Ventnor and Bonchurch for assuredly I shall omit names that should be recorded here. Please accept my apology if this has happened - I fear I do not have the meticulous ability for

documentation of the subject of this book. I must mention with thanks Mrs Joan Wolfenden, Mrs Fay Brown, Mrs Edith Beesley, Mrs R J Rayner-, Mrs Chave, all of Ventnor or Bonchurch, Dr A E Lawrence from Saint Lawrence, Mrs Mona Thomas from Thorpe Bay, Mrs Molly Sedgewick from Eastbourne and Mrs D Price from Bournemouth, all of whom added some facet to the story of a remarkable family doctor.

Finally I am grateful to my colleagues at St Mary's Hospital, Newport, particularly those in the Clinical Allergy Research Unit, who have never questioned my fascination with a medical predecessor on the Isle of Wight who I had never met, but who has taught me so much.