



IN MEMORIAM

Prof. Paul Sadoul, 1918–2011

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We learned with infinite sadness that Professor Paul Sadoul passed away on September 6, 2011, at the age of 93 years.

PAUL SADOUL: THE FRENCH PIONEER IN RESPIRATORY RESEARCH, PATIENT CARE AND MEDICAL EDUCATION

Paul Sadoul was a prominent figure in the Nancy Teaching Hospital for 35 years from 1949. After a 1-year stay with Wallace Fenn and Hermann Rahn's group, and André Cournand's laboratory in the USA, he applied new technologies for evaluating patients with chronic respiratory failure, such as right heart catheterisation at rest and during exercise. He developed a great interest in pneumoconiosis in iron and coal miners in Lorraine [1]. The respiratory function tests and epidemiological studies that he conducted with his team, using research programmes funded by the European Community for Steel and Coal (ECSC), led to the official recognition of silicosis as an occupational disease.

In 1949, Paul Sadoul established one of the earliest lung function laboratories in France; he then developed a clinical unit specialising in a condition later known as chronic obstructive lung disease. He was promoted to associate professor in 1955 and full professor and head of the Medical Department of Respiratory Insufficiency at the Maringer Hospital in Nancy in 1960. During that period, patient care benefited from the clinical research carried out in the lung function laboratory. The importance of this research was acknowledged by the establishment of the INSERM research unit number 14. Co-operation between clinical and basic investigators continued. Optimisation of mechanical ventilation benefited from René Peslin's basic research on lung mechanics and ventilators [2]. Acid–base management of lung failure benefited from Claude Saunier's work in the laboratory [3].

Paul Sadoul is also considered one of the pioneers of respiratory intensive care in France [4, 5]. He substituted instrumental invasive ventilation with a noninvasive mask technique. He also developed long-term home oxygen therapy, enabling patients to resume an almost normal life at home and with their family [6]. He became president of the French “national association for

innovation, research and the treatment at home of chronic respiratory insufficiency” (ANTADIR).

Paul Sadoul headed the INSERM unit in Nancy until his retirement in 1985. Scientists and physicians from France and many European and non-European countries gathered there to work under his direct supervision or with senior members of his group. More than 130 physicians from almost 30 countries completed fellowships in Paul's laboratory and clinical department in the 1970s and 1980s. During their stay, they worked at patients' bedsides, but also in the lung function or the heart catheterisation laboratories, as well as in the INSERM research unit. Most of them will certainly still remember their first talk in front of Paul and his team. Paul had a fantastic capacity to give confidence to younger trainees. He always paid attention to new ideas and took great care to promote projects originating from other members of his group, whether these were permanent staff or more seasonal visitors. His only requirements were that these scientific ideas or research projects were built upon strong scientific rationales and were well presented. Paul Sadoul encouraged all his fellows to stand on their own feet and to be prepared for thorough scientific discussion. As a result, he obtained the best from each of them.

Paul Sadoul was also an outstanding teacher. Every year, from 1961 to 1986, an informal meeting called “Session d'Enseignement post-Universitaire” (postgraduate session) was organised in the Prémontrés Abbey in Pont-à-Mousson (a small town near Nancy). These meetings were attended by European clinicians and researchers during a week of intensive refresher training given by members of the Nancy team and invited speakers. There, pneumologists could learn about the latest basic and clinical advances in respiratory physiopathology. The austere atmosphere of the abbey in the daytime was perfectly suited for hard work, but when night fell, the evening post-lecture dinner and vivid discussions among the attendees never lacked warm and friendly conviviality!

In 1954, Paul Sadoul launched the “Entretiens de Physiopathologie Respiratoire” (respiratory physiopathology lectures), which regularly brought together more than 300 physicians and scientists from European countries and beyond. The Entretiens, nicknamed l'Ecole de Nancy, represent one of the most fruitful endeavours of Paul Sadoul's team. Among the topics, Paul Sadoul selected epidemiology of pneumopathies, respiratory mechanics, cardiorespiratory responses to exercise, experimental respiratory insufficiencies, mucociliary clearance and airway secretions, and muscular exercise in chronic pulmonary disease (table 1).

Many outstanding scientists and renowned researchers from Europe and the USA participated in the Entretiens. Returning

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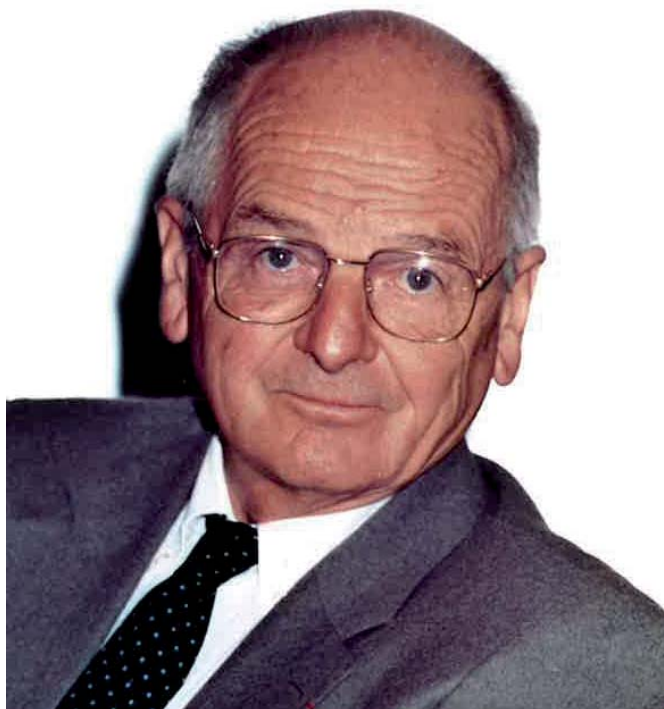


FIGURE 1. Paul Sadoul, 1918–2011.

guests and speakers were the scientific “movers and shakers” of that era, such as Arend Bouhuys, Jere Mead, Cournand, Robert Hyatt, Peter Macklem, Gordon Cumming, Joan Gil, Charles Jacquemin, Pierre Varène, Karel van de Woestijne, Nick Anthonisen, Roland Ingram, Solbert Permutt, Neil Pride and Michael Hughes, *etc.* Although the *Entretiens* were dominated by respiratory physiology and pathophysiology, their usefulness and application in medicine always formed part of the scientific programme and were highlighted in round-table discussions.

The proceedings were first published in hefty volumes, the editing of which was mostly done “in house” by Paul’s scientific pillar and friend René Peslin [2]. In fact, the whole organisation of this bi-annual meeting/congress, to which respiratory scientists were looking forward with anticipation, was done “in house”, an incredible accomplishment proving that Paul was a good team leader. Invariably, the tension got to Paul’s nerves, and as a result he got so hoarse that he could hardly talk, trying to improve his speaking by inhaling corticosteroids (to no avail, of course).

Later on the proceedings were published in special issues of the *Bulletin Européen de Physiopathologie Respiratoire* (or *Clinical Respiratory Physiology*) that was launched in 1960 with Paul Sadoul its editor in chief, the editing of which was also done “in house”. For many years it was bilingual (French–English), but this started to work against the dissipation of this journal so English became the standard language in the 1980s. From a tri-monthly journal it fairly rapidly grew into a monthly one. It

TABLE 1 The eleven sessions of the “Entretiens de Physiopathologie Respiratoire” in Nancy, and their related topics from 1954 to 1978

1954	Assessing respiratory and circulatory functions: means and limits
1956	Alveolar ventilation Physical exercise in healthy subjects and patients with silicosis
1958	Alveolar ventilation in healthy subjects and patients with chronic respiratory failure Exercise test of intermediate duration
1960	Alveolar-capillary gas exchanges
1962	Recent advances in respiratory physiology Lung gas partial pressure differences of respiratory gases across the alveolar membrane
1964	Hypercapnic acidosis in chronic respiratory failure
1967	Pulmonary circulatory disturbances in chronic respiratory failure
1970	Lung mechanics in healthy subjects and patients with chronic respiratory failure
1972	Rheology of bronchial secretions and respiratory function
1975	Tissular and humoral consequences of hypercapnia
1978	Physical exercise in chronic respiratory disease

became so successful that it was no longer feasible to manage the journal with his staff.

Over the years, several thousand papers were published by Paul’s fellows in international scientific journals, and he himself published a number of reviews and books that are still referenced and cited today.

Paul Sadoul was also an active member of the INSERM Scientific and Administration Council and was president of the Dautrebande Pathophysiology Foundation in Brussels.

PAUL SADOUL: THE EUROPEAN LEADER AND FOUNDING MEMBER OF THE EUROPEAN RESPIRATORY COMMUNITY

As a founder of the *Bulletin* (one of the two ancestors of the *European Respiratory Journal*), Paul Sadoul naturally contributed to the birth of the current official scientific journal of the European Respiratory Society.

The European Society of Clinical Respiratory Physiology (*Societas Europaea Physiologiae Clinicae Respiratoria*; SEPCR) was founded in 1966 in Prague. Paul Sadoul was elected and became the first president (from 1966 to 1973). As a founding father of the SEPCR, Paul Sadoul always kept his allegiance with people behind the Iron Curtain, trying to facilitate them in doing research and presenting results during meetings in Western Europe, joining in one of the many working groups helping them in improving scientific standards. He always remained heavily involved in the SEPCR as its president and past-president, putting in all his energy and intelligence, and promoting it as the European respiratory platform with increasing success. The SEPCR meant a lot to its members behind the Iron Curtain, many of whom received travel grants from the SEPCR. We were told that it was relatively easy for them to obtain visas to the SEPCR meetings in the west, because SEPCR was founded in Prague. The SEPCR meetings, “Pulmonary Circulation”, organised by one of us (Jiri Widimsky) and Henri Denolin, and held with

Paul's assistance in Prague at 5-year intervals from 1969–1999, similarly did much to bridge the east and west. Many SEPCR members were not well versed in French. Paul knew this: at meetings he spoke French very s-l-o-w-l-y and distinctly.

It is noteworthy that Paul Sadoul's cooperation with his European colleagues began long before the foundation of the SEPCR. Cooperation with departments of pneumology started as early as 1952 through research funds earmarked by the newly founded ECSC to promote research, fellowships and scientific meetings in the six countries having signed the Rome Treaty.

Paul Sadoul made an enormous contribution to the respiratory community. He was a great leader, and also an immense humanist who undoubtedly has influenced several generations of men and women who have been fortunate enough to meet him, work with him and learn to like him.

PAUL SADOUL: THE UNIVERSAL AND ETERNAL SCHOLAR

Paul Sadoul's interests were not confined to medicine. Paul had extensive knowledge of the history and culture of his native region, Lorraine, in the north-east of France. After he retired he kept himself quite busy. He was president of the Archeological Society of Lorraine and the Musée Historique Lorrain from 1987 to 1997, during which time he participated in the development and enrichment of the collections of the museum. In 1988, he was appointed chief editor of the periodical *Le Pays Lorrain* which his father, Charles Sadoul, had launched in 1904. He also became president of the prestigious "Académie de Stanislas" in Nancy. In both positions, he acted as a "patriote lorrain" and expert on the history of the dukedom of Lorraine.

In 2008, Paul Sadoul proposed to all the alumni of the INSERM 14 Unit that they write anecdotes of their time there, which were compiled in a booklet entitled *L'aventure de la physiopathologie respiratoire nancéienne*. In this touching book, full of marvellous memories, all his fellows highlighted his charisma, constant dynamism, scientific rigour and visionary spirit. They were all very proud to have belonged to his school and to have had the unique privilege of working with him.

Paul was a generous, sincere, magnanimous and driven person, emotional and clear and outspoken in debates. Two occasions where he was moved to tears come to mind. As the honorary president of the SEPCR he often attended meetings of the executive committee. One day, in Paris, we had a disagreement with him about the way forward. This was a quite painful experience, because we all respected him so much. The argument was brought to an end, and he was then told that the executive committee had decided to institute the Paul Sadoul lecture, so that he would live on forever. It was as if he was struck by lightning; it was quite moving to see how it sank in, and how immensely grateful and humbled he felt by this honour. The other occasion was at his retirement before a large audience in Nancy, where he was regularly overwhelmed with emotion. These experiences just enhanced the picture of a very warm and humane person who forged long-lasting relationships with his environment. But Paul could also be very decisive. He is the only person known to us who was asked to taste the wine at a dinner, and then turned down three



FIGURE 2. Paul Sadoul and his wife, Colette.

successive bottles before deciding that it met his expectations and was worthy of being served to the guests.

Paul Sadoul has left an enormous legacy: he co-founded the SEPCR and led it for many years as its president, then honorary president, and was continually involved in its running, so that it became an international society of researchers and friends. He founded the *Bulletin Européen de Physiopathologie Respiratoire*, donated it to the SEPCR, and it gradually increased its standing so that it developed into one of the world's leading respiratory journals. From 1954 he organised the *Entretiens de Physiopathologie Respiratoire* in Nancy, a tri- or bi-annual meeting to which the "cream of the crop" liked to come. He had a true international and scientific scope with a long-standing relationship with the High Authority of the Communauté Européenne du Charbon et de l'Acier (ECSC). He has done more than anyone we are aware of to unify the respiratory field and provide it with a platform comprising of a journal, high-quality meetings and a high-standing SEPCR. He was a person with outstanding qualities, and a warm and loyal friend.

We offer our sincere condolences to his wife, Colette, and to his children, grandchildren and great grandchildren, and to all people that knew and admired him.

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