The year 2015 was the 100th year of the First World War. During the Second World War scientists developed the atom bomb which killed thousands of lives. However, the decision to drop the bomb was taken by politicians, not scientists, most of whom were dead against it.

But during the First World War the decision to use poison gas was taken by a scientist. Not only that, he himself led the warfare and convinced the others. However, his wife Clara Immerwahr committed suicide trying to pressurize him to stop the use of poison gas. The scientist was Fritz Haber. Clara was also a promising scientist and perhaps the first lady who sacrificed her life to stop the misuse of science.

Clara Immerwahr was born in Germany near Breslau on 21 June 1870. On Polkendorff Farm where Clara lived there was no school for girls. So Clara had no option but to study under private tutors just as her other siblings. Clara spent her winters at Breslau with her siblings where her grandmother had a big garment shop.

In 1877, while they were at Breslau, their grandmother admitted them in a school and it was decided that during the winter they will be at school and rest of the time when on Polkendorff Farm they will have to take education under private tutors. None of the children were

Rankled by her husband's work in preparing and using poison gas against enemies during the First World War, and frustrated at not being able to dissuade him from his heinous actions, Clara Immerwahr, wife of Fritz Haber, committed suicide.
interested in education, except Clara. She was an eager student and keenly interested in science. She wanted to take science as her career and established herself in “prospective sphere of women’s occupations.”

While both her sisters left the school, her brother Paul went on to earn a PhD degree from Berlin University. This further motivated Clara. Her father also wanted to see her as a scientist. When Clara’s mother died of cancer in 1890 her father moved to Breslau with Clara for her further studies. It was here that Clara met a handsome, well-educated boy named Fritz Haber in a dancing lesson. He proposed to her, but Clara declined the offer as she wanted to be economically independent by taking science as her career.

Her father came to know about Miss Knittel, a widely traveled woman who ran a teachers’ seminary. Philipp admitted Clara to that school. Miss Knittel soon identified Clara’s aptitude towards science and presented her with Jane Marcet’s Conversations on Chemistry. This book had a great influence in Clara’s life as she decided to make chemistry her area of specialization.

After completing her studies at the seminary Clara worked as a governess, giving private lessons, as she had no option for higher studies since at that time Breslau University did not admit girl students. But she fought for permission to take the preliminary examination, which would enable her to qualify for university entrance. Ultimately she won the struggle and during 1895–1896 session women teachers were allowed to attend lectures at Breslau University as visitors.

This continued for two years, finally in 1898, Breslau University allowed her to appear in the examination and Clara Immerwahr became the first woman in Germany to pass the difficult Verbandsexamen, a pre-doctoral qualifying examination designed to raise standards in the training of professional chemists.

On 12 December 1900, Clara Immerwahr was awarded a doctorate in physical chemistry with magna cum laude, which means with high merit. Her dissertation paper was on the study of the solubility of metal salts, conducted under the supervision of Professor Richard Abegg. She dedicated her paper to her “dear father” who inspired her throughout life. She thus became the first woman to be awarded a doctorate in chemistry at a German university.

During the First World War the decision to use poison gas was taken by a scientist, Fritz Haber. Not only that, he himself led the warfare and convinced the others.

After working as laboratory assistant to Professor Abegg—at the highest rank attainable by women—Clara Immerwahr worked briefly as a researcher in Clausthal and gave lectures on “Physics and Chemistry in the Household” at various women’s organizations and institutes. She was several times invited to serve as discussant at the oral presentations of doctoral theses.

Nevertheless, she began to feel an outsider in the male-dominated university circles. In spite of all her efforts she could not manage a job in any research institution or university. She was frustrated.

In April 1901, Clara and Fritz Haber met again. Haber had in the intervening years gained respect and recognition for his research in electrochemistry and thermodynamics. This time Clara could not deny when Fritz Haber proposed her again. So they married in August 1901 and settled in Karlsruhe.

However, Clara soon realized that marrying an ambitious person like Haber was the greatest mistake in her life. To fulfill his ambition Haber frequently invited important guests in their house for dinner. Clara had to arrange those dinner parties. Clara could hardly manage any time for herself.

Further misfortune was waiting for her. Through a difficult pregnancy she gave birth to a sickly son, Hermann on 1 June 1902. Now she had to devote almost all her time looking after Hermann. So Clara decided not to concentrate on her research, but to devote her time to writing books.
Haber wanted to publish her lectures on "Thermodynamics" in the form of a textbook. So, Clara also went ahead and collaborated with her husband in his research and especially his textbook in the thermodynamics of gas reaction, which he published in 1905. When the book was published, she found that Haber had dedicated the book to his "beloved wife, Mrs. Clara Haber, Ph.D., with thanks to quiet collaboration." That was all. Haber nowhere mentioned Clara as a co-writer.

Clara was disheartened but continued to give lectures to women. However, often she would get infuriated to find that people naturally assumed that the lectures had been written by her husband. Clara's life was becoming miserable day by day.

Meanwhile, Fritz Haber's career flourished. In his thermodynamics book he had stated how to prepare ammonia industrially by using iron catalyst. In 1908, BAFS (BadenAnilinandSodaFactory) appointed him for ammonia preparation. In 1909, he successfully prepared ammonia by the synthesis of nitrogen and hydrogen. The company started commercial production of ammonia by using Haber's principle. This discovery made him renowned as well as rich.

In 1911, he was appointed head of the recently founded Kaiser Wilhelm Institute of physical chemistry and electrochemistry in Berlin. The outbreak of World War I in 1914 gave Haber an opportunity to prove his patriotism. He concentrated all his efforts on developing poison and other gases. He was soon entrusted with the development of war raw materials and with responsibility for the development of ammonia synthesis. In early 1915, he suggested a diabolically simple idea: to release highly toxic chlorine gas so that it would drift across to the enemy trenches, where it would kill the opponents without any artillery bombardment.

Clara could not forget the oath she had taken when she got her doctorate degree. Appalled, she came out in open opposition to this work, condemning this "perversion of the ideals of science" as "a sign of barbarity, corrupting the very discipline which ought to bring new insights into life." Haber's enthusiastic dedication to chemical warfare represented the final break.

She pleaded with him several times to cease working on gas warfare. She tried to remind Haber about those international treaties where Germany had signed promising not to use poisonous gas during war. But she always faced an angry response from Haber. Haber accused her in public of making statements treasonous to the Fatherland.

Finally, the first poison gas attack took place on 22 April 1915, on the Western front in the Ypres sector of Belgium. There were nearly seven thousand casualties, more than five thousand died in that attack. Countless additional attacks resulted in the deaths of at least a hundred thousand soldiers on both sides.

Haber was promoted to the rank of captain. He returned in triumph to his home and attended a party in his honour on May 1, the night before he was due to go to the eastern front to supervise a gas attack. The couple quarreled. In the early hours of May 2 Clara Immerwahr took her husband's pistol out to the garden and shot herself. Perhaps she thought that she could stop Haber from taking any further action.

But it was all in vain. On the same day Fritz traveled to the eastern front, leaving his son to deal with the situation. Haber was so powerful that no newspaper flashed the news. On May 8 the Grunewald Zeitung reported on the suicide of the wife of "Dr. H. Of the Secret Service who is currently at the front," adding that "the reasons for the unhappy woman's act are not known." For the rest of his life Haber never discussed any of the events of his wife's death.

In 1918 Haber was awarded the Nobel Prize for his pathbreaking work in ammonia synthesis. But when he received the award the great physicist Ernest Rutherford refused to shake his hand. A few months later there were calls for him to be tried as a war criminal.

In May 1933, following the Nazi rise to power, Haber was called to dismiss all Jewish members of his staff, but preferred to resign his position and go into exile, finding refuge in England at Cambridge University. Neither the climate nor the work environment was to his liking. He felt rejected as a pariah for his war activities. Emotionally shattered, he decided to go to Italy. On the way in January 1934 he died of a heart attack in Basel.

Clara Immerwahr was a promising German scientist. The society, family, and husband everyone had betrayed her. But she remained faithful towards science. Throughout her tragically short life, Clara remained faithful to her name, Immerwahr, which means "always true".