

Aum Shinrikyo's Chemical Terrorism in Tokyo Subway, Japan

- II. International CBRN Congress 2019
- Organized by Ministry of Interior Disaster and Emergency Management Presidency, Turkey Government
- Nov. 27-29, 2019 Ankara, Turkey
- Speaker: Anthony T Tu, Professor Emeritus
- Colorado State University, Ft. Collins, Colorado , USA

- Present Address: San Mateo, California, USA
- E-mail: atucsu@gmail.com

Final objective of Aum Shinrikyo was to overthrow the Japanese Government

Aum Shinriko

| | | |
|------|---------------------------------------|----------------|
| 1984 | Aum Shinsen Club | 15 members |
| 1987 | Aum Shinrikyo | 1300 members |
| 1989 | Obtained a legal religious sect title | |
| 1994 | In Japan | 10,000 members |
| | In Russia | 30,000 members |

Offices in New York,
Frankfurt, and Moscow

Sarin Manufacture Site in Kamikuishiki

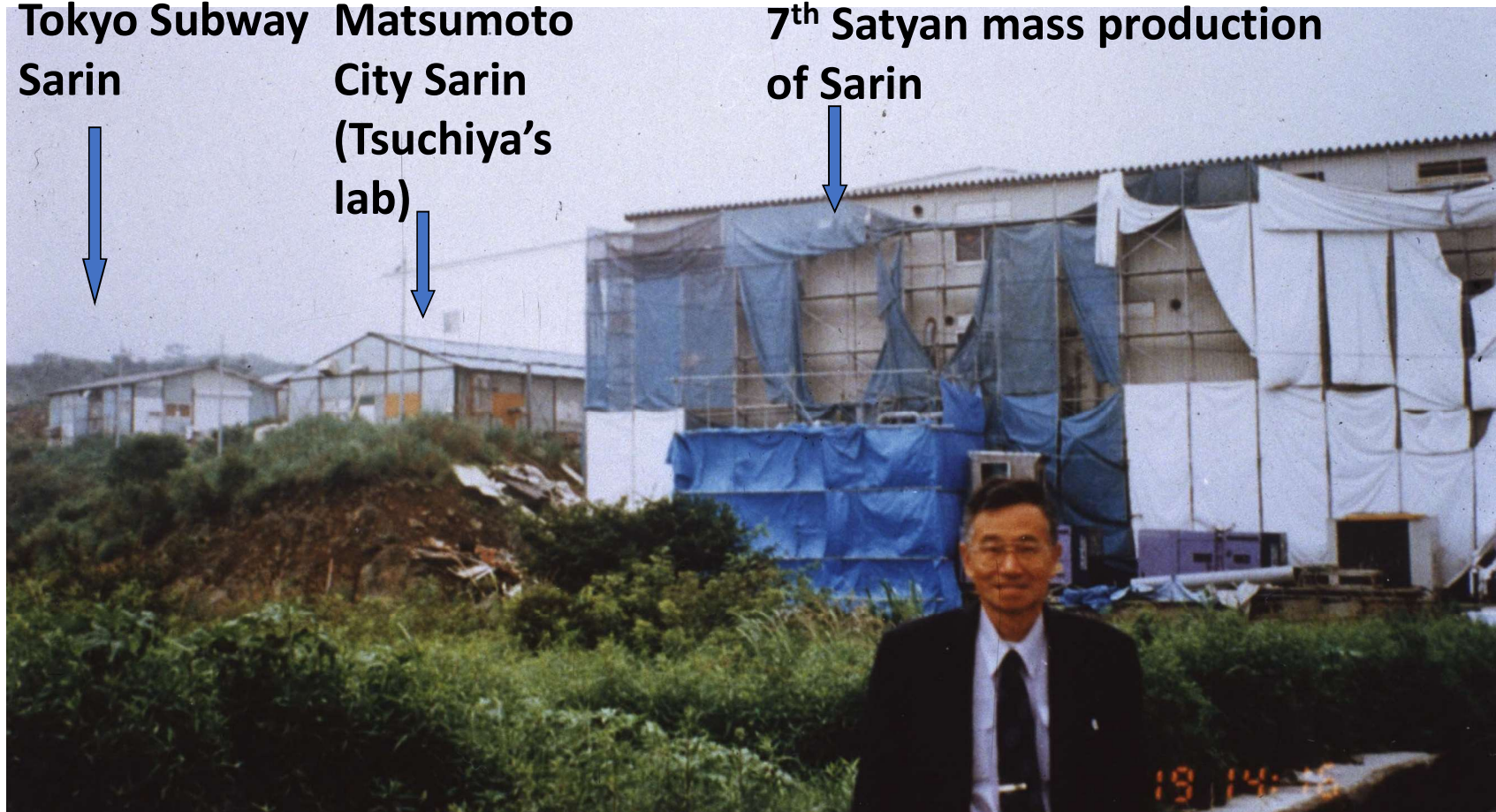
Tokyo Subway Sarin



Matsumoto City Sarin (Tsuchiya's lab)



7th Satyan mass production of Sarin



Ultimate object of Aum Shinrikyo is to establish its own government so they prepared conventional as well as chemical and biological weapons in large quantity





Aum Shinrikyo put the wagon in this parking lot near the Matsimoto judge's residence



June 1994

June 2014

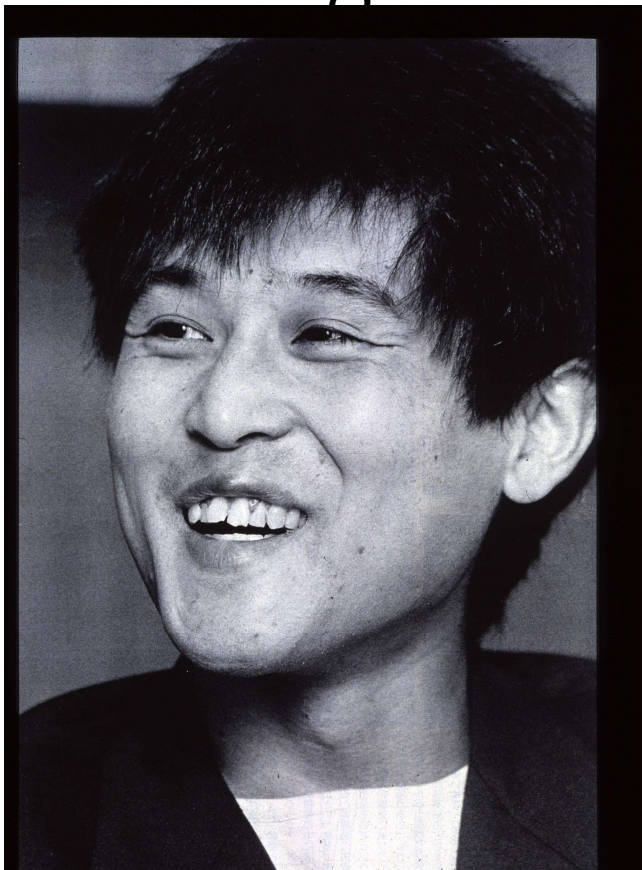


Sarin Attack in Matsumoto City

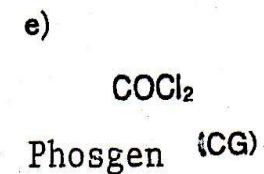
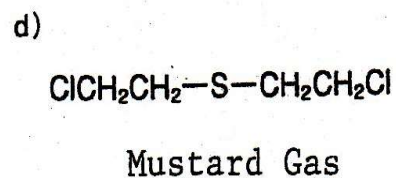
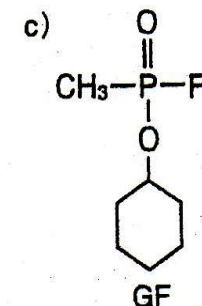
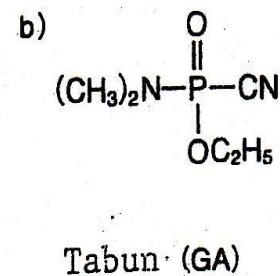
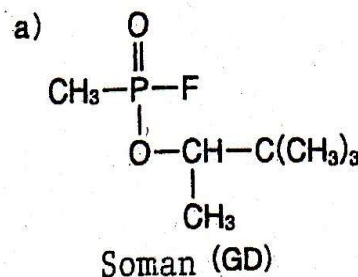
By Aum Shinrikyo

June 27, 1994

Chemical Agents Other than Sarin and VX

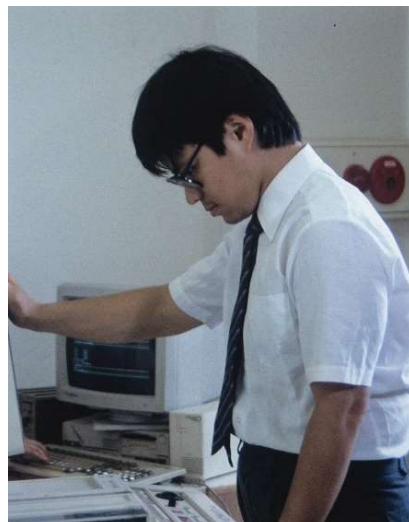
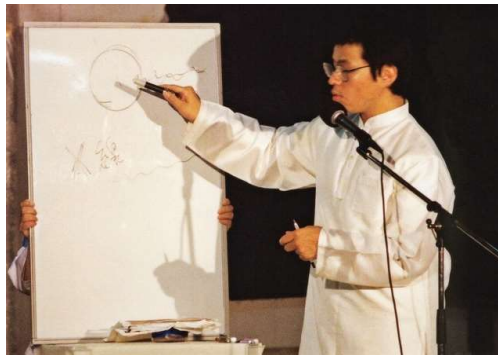


Masami Tsuchiya
Head of Chemical Weapons team



F) HCN

Dr. Nakagawa's photo, all were taken before his arrest in 1995, He was executed by hanging on June 6, 2018.

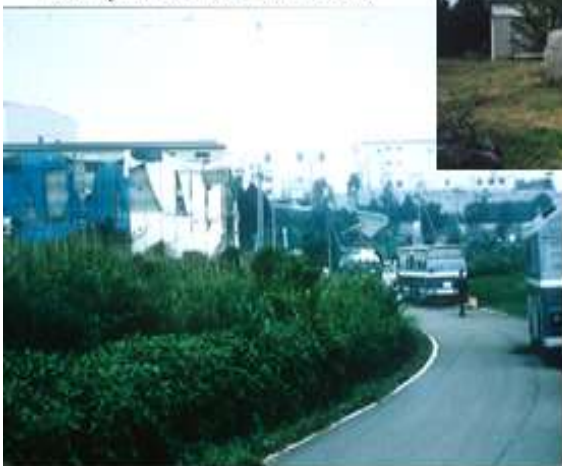


Tokyo Detention Center

All 13 Aum Shinrikyo death row inmates are here



Gas Leak from 7th Satyan:
July 9 and 15 1994
Compound not identified



People across the street
could not breathe due to
the gas leak





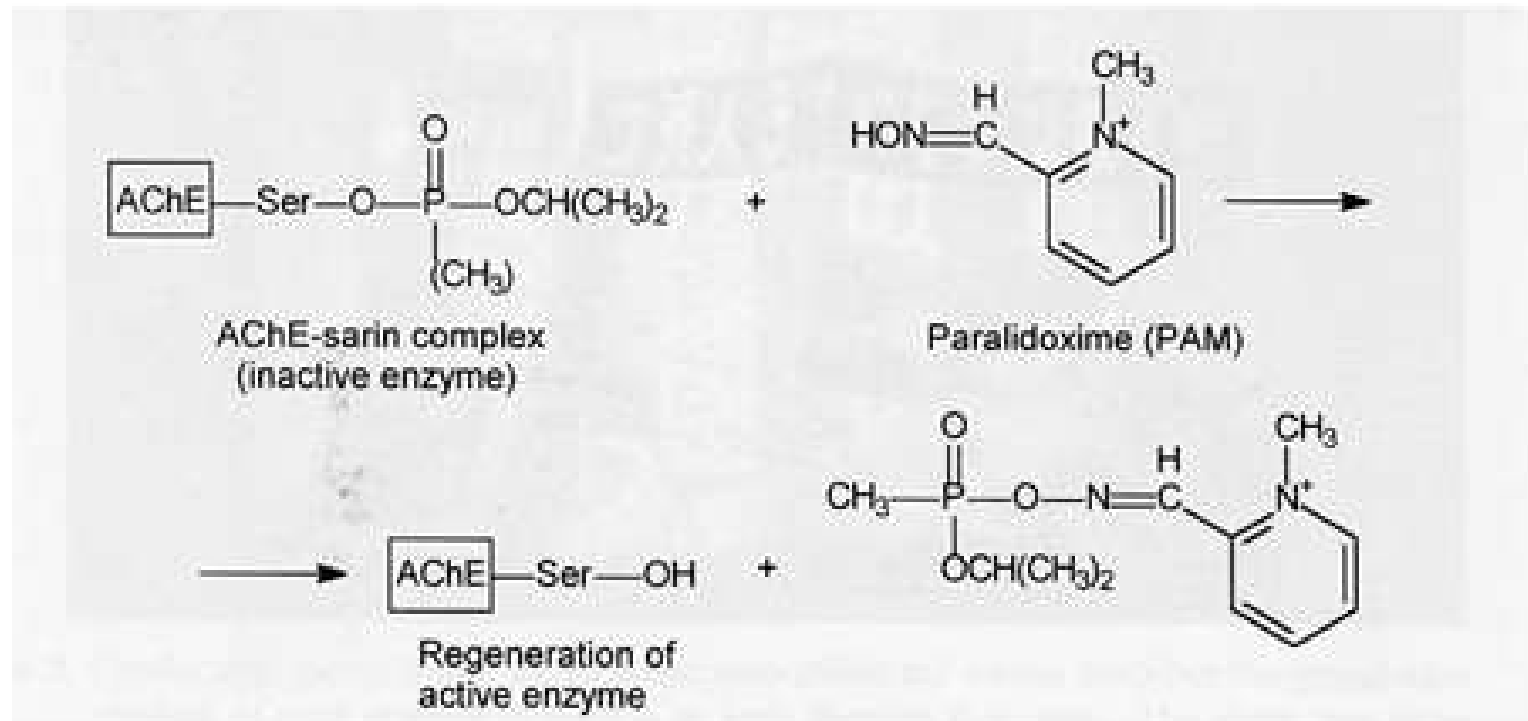
March 20, 1995: Tokyo subway was attacked with sarin by Aum Shinrikyo

Rescued by Tokyo Fire Station personnel



Treatment at St. Luke's International Hospital

In Japan, PAM was also used



March 20, 1995

Shrinkage of the pupil



Eye pain

Decontamination of Subway Cars, March 1994



CAM (chemical agent monitor) is essential
for detection of poisonous gas



Japanese Police's Chemical Agent Monitor
3-22-1995



Kim Jong-nam was assassinated with VX in Kuala Lumpur, Malaysia on Feb. 13, 2017



Aum Shinrikyo Injured two persons with VX

Attempt to murder with VX

1. Dec. 2, 1994 for Mr. Noboru Mizuno



2. Jan. 4, 1995 for Mr. Hiroyuki Nagaoka



Aum Shinrikyo murdered Mr. Tadahito Hamaguchi in Osaka on Dec. 12, 1994. This was the first case of murder with VX in the world.



Volume 36 · Number 2 · July 2018

Forensic Toxicology




Forensic Toxicology (2018) 36:542–544
<https://doi.org/10.1007/s11419-018-0426-9>



LETTER TO THE EDITOR

Murders with VX: Aum Shinrikyo in Japan and the assassination of Kim Jong-Nam in Malaysia

Tomomasa Nakagawa¹ · Anthony T. Tu^{2,3} 

Received: 3 February 2018 / Accepted: 7 May 2018 / Published online: 21 May 2018
© Japanese Association of Forensic Toxicology and Springer Japan KK, part of Springer Nature 2018

 Springer

| Name of chemical/ Abbreviation | Detected from | | |
|---|---------------|------------|------------|
| | Mr. Kim | Vietnamese | Indonesian |
| VX | ✓ | ✓ | |
| 2-(N,N-diisopropylamino) ethylchloride | ✓ | ✓ | |
| 2-(N,N-diisopropylamino) ethanethiol | ✓ | ✓ | |
| O-Ethyl methylphosphonothioic acid | ✓ | | |
| Ethyl methylphosphonic acid | ✓ | | ✓ |
| Bis(2-diisopropylaminoethyl) sulfide | ✓ | | |
| Bis(diisopropylaminoethyl)disulfide | ✓ | ✓ | |
| 2-(N,N-dimethylamino) ethanol | ✓ | | |

Binary system of VX made by the US Army

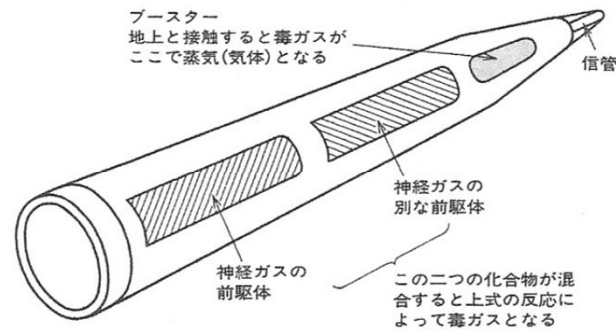
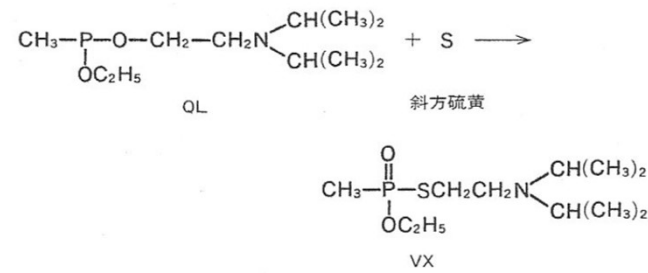
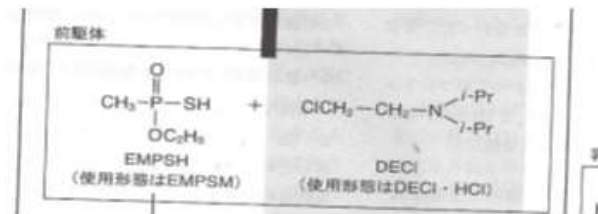


図 24 二元構造の新式神経ガス弾

My conclusion of North Korean Binary VX that assassinated Kim Jong-Nam

Possible Binary System used in Malaysia



How to combat against terrorism

- Registration of potentially dangerous compounds and equipment
- Identification equipment
- Storage place for drugs and defense equipment
- Establish the route of movement of drugs and equipment
- Decontamination equipment
- Communication in emergency case

For Dr. Tu's contributions in the Aum Shinrikyo Investigation, the Japanese Emperor Awarded him the Order of the Rising Sun, Gold Rays with Neck Ribbon

