

Glenn A. Cross, PhD AKC

glenn@crossbowanalytics.com

<http://crossbowanalytics.com>

CURRENT POSITION

12/2019-present

Founder/Principal

Crossbow Analytics LLC

Provide timely, expert assessments of potential WMD threats from state and non-state actors. Apply experienced analysis to detect the deliberate use of pathogens or toxins and distinguish those events from accidental releases or natural disease outbreaks. Examine challenges facing international scientific cooperation in the life sciences. Identify foreign disinformation or influence campaigns aimed at US biodefense activities in the US or abroad. Assess foreign cyberbiosecurity threats.

In addition to research and writing for academic journals and book chapters, some projects have included:

- Researcher, CBW Assassinations in Relation to CBW Norms Project (Open Philanthropy)
- Researcher, CBW Threat Posed by Apocalyptic and Millennialist Movements (Open Philanthropy)
- Participant, AI Safety Institute project on AI application to development of BW
- Researcher on CBW Open Bibliography (NEMESYS Insights)
- Affiliate Researcher, Arizona State University
- Consultant, Approaches to warn health care systems about emerging disease outbreaks, natural, accidental, or intentional (Proseko LLC)
- Consultant to OpenAI on BW
- Participant in a study of BWC governance (University of Cambridge's Center for the Study of Existential Risks)
- Participant, Redteaming exercise on whether COVID-19 has incentivized BW development (SUNY Albany)
- Member, ASU PhD Dissertation Committee for David Gillum (Biosafety/Biosecurity)

RECENT POSITIONS

10/2014-12/2019

Intelligence Analyst

Federal Bureau of Investigation
Phoenix Arizona

Provided timely, relevant, and actionable analyses of weapons of mass destruction (WMD) threats in Arizona. Monitored emerging WMD threats worldwide. Participated in FBI-chaired Food-Agriculture Security working group with the Arizona State Veterinarian. Member of the FBI's Weapons of Mass Destruction Directorate Advisory Board.

10/2013-10/2014

Supervisory Intelligence Analyst

Federal Bureau of Investigation
WMD Directorate
FBI Headquarters, Washington, DC

Oversaw a special project to identify lone wolf actors' interest in biological weapons.

10/2012-10/2013

Supervisory Intelligence Analyst

Federal Bureau of Investigation
National Cyber Investigative
Joint Task Force (NCIJTF)

Detailed from the FBI's WMD Directorate to the NCIJTF to establish and supervise an interagency intelligence analysis program, including managing a small team of all-source, strategic intelligence analysts, creating an NCIJTF product line, working with IC partners, and developing NCIJTF processes and procedures for the production and dissemination of NCIJTF intelligence analyses. Initiated efforts to examine foreign cyber threats to US life science enterprises.

10/2010-10/2012

Supervisory Intelligence Analyst

Federal Bureau of Investigation
WMD Directorate
FBI Headquarters, Washington, DC

Returned to the FBI to supervise a team of BW analysts in the FBI's Weapons of Mass Destruction Directorate (WMDD), the only such unit in the FBI dedicated to all-source BW analysis. Responsibilities included the oversight of BW analytical production in the WMD Intelligence Analysis Section, training, mentoring, and managing analysts' production and performance.

09/2008-10/2010

Deputy National Intelligence Officer
(D/NIO) for WMD & Proliferation

National Intelligence Council (NIC)
Office of the Director of National
Intelligence (ODNI)

As the D/NIO responsible for biological weapons (BW) issues, led the Intelligence Community's production of strategic analysis of BW issues involving both state and non-state actors. Was the principal advisor on biological weapons issues to the Director of National Intelligence in support of his role as the principal intelligence advisor to the President, including production of IC coordinated papers for senior-level Executive committee. Also provided authoritative guidance—based on customer needs and analytical requirements—for both IC collection and analysis related to BW issues. Briefed Congressional committees and members on a wide range of BW-related topics.

04/2004-09/2008

Supervisory Intelligence Analyst

Federal Bureau of Investigation
WMD Directorate
FBI Headquarters, Washington, DC

Coordinated FBI and CIA operations targeting non-state actors WMD activities. Supervised analytical team looking at WMD issues involving non-state actors. Directed analytical efforts. Reviewed and approved WMD analytical products. Conducted annual employee performance reviews.

02/1988-04/2004

Intelligence Analyst

Federal Bureau of Investigation &
Central Intelligence Agency

Have a 30+ year career as an intelligence analyst, holding analytical positions of increasing responsibility and scope related to WMD issues in both the Federal Bureau of Investigation as well as the Central Intelligence Agency. Led or been involved in the intelligence analysis of key issues including chemical and biological weapons proliferation, terrorist acquisition and possible use of

WMD, and nuclear smuggling. Produced current and strategic, all-source intelligence analysis, supported CIA and FBI operations related to WMD, and provided support to senior-level policymakers.

ADJUNCT ACTIVITIES

01/2011-09/2013	<u>IC Advisor to IC Postdoctoral Research Fellow</u>	George Mason University Fairfax, VA
-----------------	--	--

Oversaw a team at George Mason University postdoctoral researchers working to develop an advanced analytical methodology for the analysis of intelligence topics with little-to-no recent reliable intelligence reporting. The IC Postdoctoral Fellows examine the existing structured analytic techniques used by the Intelligence Community and developed an approach to improve the accuracy and transparency of analytical judgments when analysts are faced with little-to-no information. The team held several workshops to refine their tools and presented their findings at an IC conference. Their results were published in a peer-reviewed journal.

01/2007-09/2008	<u>Intelligence Community Postdoctoral Research Fellow</u>	Georgetown University Washington, DC
-----------------	--	---

Focused on the development of analytical tools to provide more timely and effective indications and warning of suspect BW-related events, distinguishing manmade events from natural disease outbreaks. Research centered on the analysis of several complex historical case studies involving known or suspected cases of BW development and use by state and non-state actors. The project aimed to use these case studies to develop methodologies for use in the identification, characterization, and possible attribution of suspect BW-related events.

EDUCATION

2024	Associate of King's College, London (AKC)	King's College, London	London, UK
2007	PhD (Biodefense)	George Mason University College of Science Dissertation title: Dirty War: The Rhodesian Chemical and Biological Warfare Effort (1975-1980) Dissertation Chair: Dr. Ken Alibek	Fairfax, VA
2004	M.A. (distinction) (International Trade)	George Mason University School of Public Policy	Fairfax, VA
1986	M.A. (War Studies)	King's College, London (University of London)	London, UK
1985	A.B. (double major—History & Political Science)	Columbia College (Columbia University)	New York, NY

1983-1984	General Course (International Relations)	London School of Economics (University of London)	London, UK
-----------	---	--	------------

PUBLICATIONS

- 06/2025 (Commentary with Al Mauroni) "Will China Force a Rethink of Biological Warfare?" *War on the Rocks*, <https://warontherocks.com/2025/06/will-china-force-a-rethink-of-biological-warfare/>.
- 02/2025 (Book Review) "Is there a biological weapons taboo, and does it matter?" in *Nonproliferation Review*, <https://doi.org/10.1080/10736700.2024.2415256>.
- 10/2024 (Book Chapter, with Kathleen Vogel) "State-Sponsored Assassinations and How They Challenge the CW Norm," in *International Security Studies and Technology Approaches, Assessments, and Frontiers*, (eds.) Tobias T. Gibson and Kurt W. Jefferson (Northampton, MA: Edward Elgar Publishing, Inc., 2024)
- 10/2023 (Online Article) "Intelligence in Counterinsurgency: Lessons from the Rhodesian Experience," *Noneqai: South African Forces History Magazine*, Vol. 14, No 10A, October 2023.
- 06/2022 (Book Review) "The Long, Cloudy History of Moscow's BW Program," *Nonproliferation Review*, DOI: 10.1080/10736700.2022.2075642.
- 11/2021 (Online Refereed Article) "Biological Weapons in the 'Shadow War'," *War on the Rocks*, <https://warontherocks.com/2021/11/biological-weapons-in-the-shadow-war/>
- 09/2021 (Book Chapter) "Intelligence in Counterinsurgency: Lessons from the Rhodesian Experience," in *African Intelligence Services: Early Post-Colonial and Contemporary Perspectives* (Boston, MA: Roman & Littlefield, September 2021)
- 03/2021 (Article) "Wrestling with Imponderables: Assessing Perceptions of Biological Weapons Utility," *Nonproliferation Review*, (Spring 2021)
- 06/2020 (Article) "Twenty-first-century perspectives on the Biological Weapon Convention: Continued relevance or toothless paper tiger," *Bulletin of the Atomic Scientists*, <https://doi.org/10.1080/00963402.2020.1778365>
- 01/2019 (Online Refereed Article) "Death in the Air: Revisiting the 2001 Anthrax Mailings and the Amerithrax Investigation," *War on the Rocks*, <https://warontherocks.com/2019/01/death-in-the-air-revisiting-the-2001-anthrax-mailings-and-the-amerithrax-investigation/>
- 08/2017 (Online Refereed Article) "Long Ignored: The Use of Chemical and Biological Weapons Against Insurgents," *War on the Rocks*, <https://warontherocks.com/2017/08/long-ignored-the-use-of-chemical-and-biological-weapons-against-insurgents/#content>
- 03/2017 (Book) *Dirty War: Rhodesia and Chemical Biological Warfare, 1975-1980* (Solihull, UK: Helion Publishing, Co, 2017)

04/2013 (Article) C. Karvetski, K. Olson, D. Gantz, G. Cross, "Structuring and analyzing competing hypotheses with Bayesian networks for intelligence analysis," *EURO Journal on Decision Processes*, 30 April 2013, doi 10.1007/s40070-013-0001-x.

PRESENTATIONS/PODCASTS

06/2025 Presentation entitled **Use in Grey Zone Crises: Future of Chemical Weapons** at « Prométhée aux enfers: permanences et mutations de la guerre chimique » panel sponsored by Sciences Po—Aix-en-Provence and AEGES.

10/2023 Presentation entitled **State CBW Use in Assassination** at Justus Liebig Universität (University of Gießen) sponsored conference, "Chemical and Biological Weapons: The Interconnectivity of Norms."

05/2023 Presentation entitled **State Use of CBW in Assassinations Since 1946** at University of Swansea conference State-Sponsored Assassinations in International Politics, History, and Law.

01/2023 Podcast presentation on Rhodesian CBW effort to *Poisons and Pestilence* podcast hosted by Brett Edwards PhD, << <https://poisonsandpestilence.podbean.com/>>>

12/2017 Presentation to the annual Jonathan Tucker Memorial CBW Symposium, entitled **Dirty War: Rhodesia and Chemical, Biological Warfare, 1975 to 1980**, National Defense University and Center for Nonproliferation Studies, Washington, DC.

07/2016 Panelist, **Dogs That Haven't Barked: Towards an Understanding of the Absence of Expected Technological Threats**, Center for Global Security Research Workshop, Lawrence Livermore National Laboratory, Livermore, CA.

02/2013 Presentation to the DARPA Defense Science Office's Biological Sciences Seminar, entitled "**Dirty War: The Rhodesian Bio-Chemical Offensive Program, 1975-1979.**"

01/2013 Invited lecture at Cornell University's Judith Reppy Institute for Peace and Conflict Studies, entitled "**Dirty Tricks: The Rhodesian CBW Effort.**"

09/2013 Panel chair, Improving Intelligence Analysis of Emerging Biotechnology Threats Workshop, sponsored by the Economic and Social Research Council, London, UK.
Discussant, Improving Intelligence Analysis of Emerging Biotechnology Threats Workshop, sponsored by the Economic and Social Research Council, London, UK.

04/2008 Lecture at the 8th Annual IC Postdoctoral Research Fellowship Colloquium, entitled "**Dirty War: Anatomy of a Biological Event (Rhodesia), 1978 to 1980.**"

04/2007 Poster Presentation at the 7th Annual IC Postdoctoral Research Fellowship Colloquium, entitled "**Project Argus: Indications & Warnings of Covert Biological Weapons Activities**"

CERTIFICATIONS

- Intelligence Community Advanced Analyst Program (ICAAP) certification, November 2018
- Intelligence Community Joint Duty Award, October 2010

AWARDS/HONORS

- FBI Medal of Excellence (2018), awarded by FBI Director Christopher Wray
- Meritorious Unit Citation (2006), awarded by the Director, National Counterterrorism Center
- Membership in Pi Alpha Alpha, a national public policy honor society (2004)
- Numerous awards/commendations from Director of DCI's Nonproliferation Center and Director of CIA Weapons Intelligence, Nonproliferation, and Arms Control Center (1993-2002)
- Studies in Intelligence Award (1989), presented by Director of Central Intelligence William Webster.