



Global African Swine Fever Research Alliance

Fighting African Swine Fever Together



ABOUT

ORGANIZATION

NEWS and EVENTS

RESOURCES

CONTACT

GAP ANALYSIS REPORT



SAVE THE DATE 

MANILA, PHILIPPINES

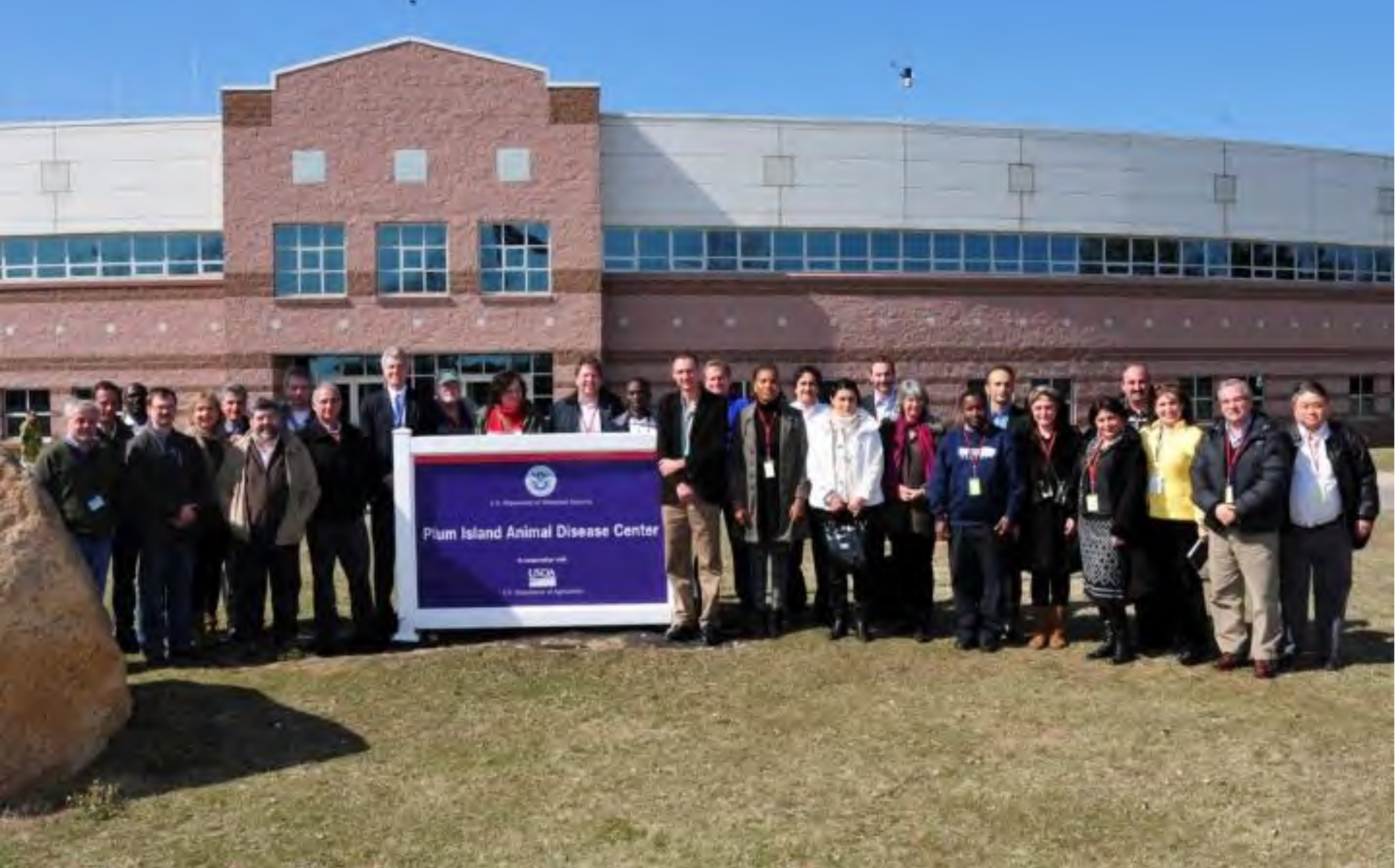


GARA

GAP ANALYSIS WORKSHOP

DECEMBER 5-7, 2023

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Senior National Program Leader
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Agricultural Research Service
United States Department of Agriculture



**1st GARA Scientific Conference, Plum Island Animal Disease Center,
Orient Point, New York, United States of America, April 6-8, 2013**

5th GARA Scientific Conference
Santa Domingo, Dominican Republic
May 24-27, 2022



Vision of GARA

A coordinated global research alliance
enabling the progressive control and
eradication of ASF



Fighting African Swine Fever Together

Mission of GARA

To establish and sustain global research partnerships that will generate scientific knowledge and tools to contribute to the successful prevention, control and where feasible eradication of African Swine Fever.



Fighting African Swine Fever Together

Strategic Goals of GARA

- **Goal 1.** Identify research opportunities and facilitate collaborations within the Alliance
- **Goal 2.** Conduct strategic and multi-disciplinary research to better understand ASF
- **Goal 3.** Determine social and economic drivers and impact of ASF
- **Goal 4.** Develop novel and improved tools to support the prevention and control of ASF
- **Goal 5.** Determine the impact of ASF prevention and control tools
- **Goal 6.** Serve as a communication and technology sharing gateway for the global ASF research community and stakeholders



Global African Swine Fever
Research Alliance

Fighting African Swine Fever Together



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New perspective on African swine fever: a bibliometrics study and visualization analysis

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Yu Z, Xie L, Shuai P, Zhang J, An W, Yang M, Zheng J and Lin H (2023) New perspective on African swine fever: a bibliometrics study and visualization analysis. *Front. Vet. Sci.* 10:1085473. doi:10.3389/fvets.2023.1085473

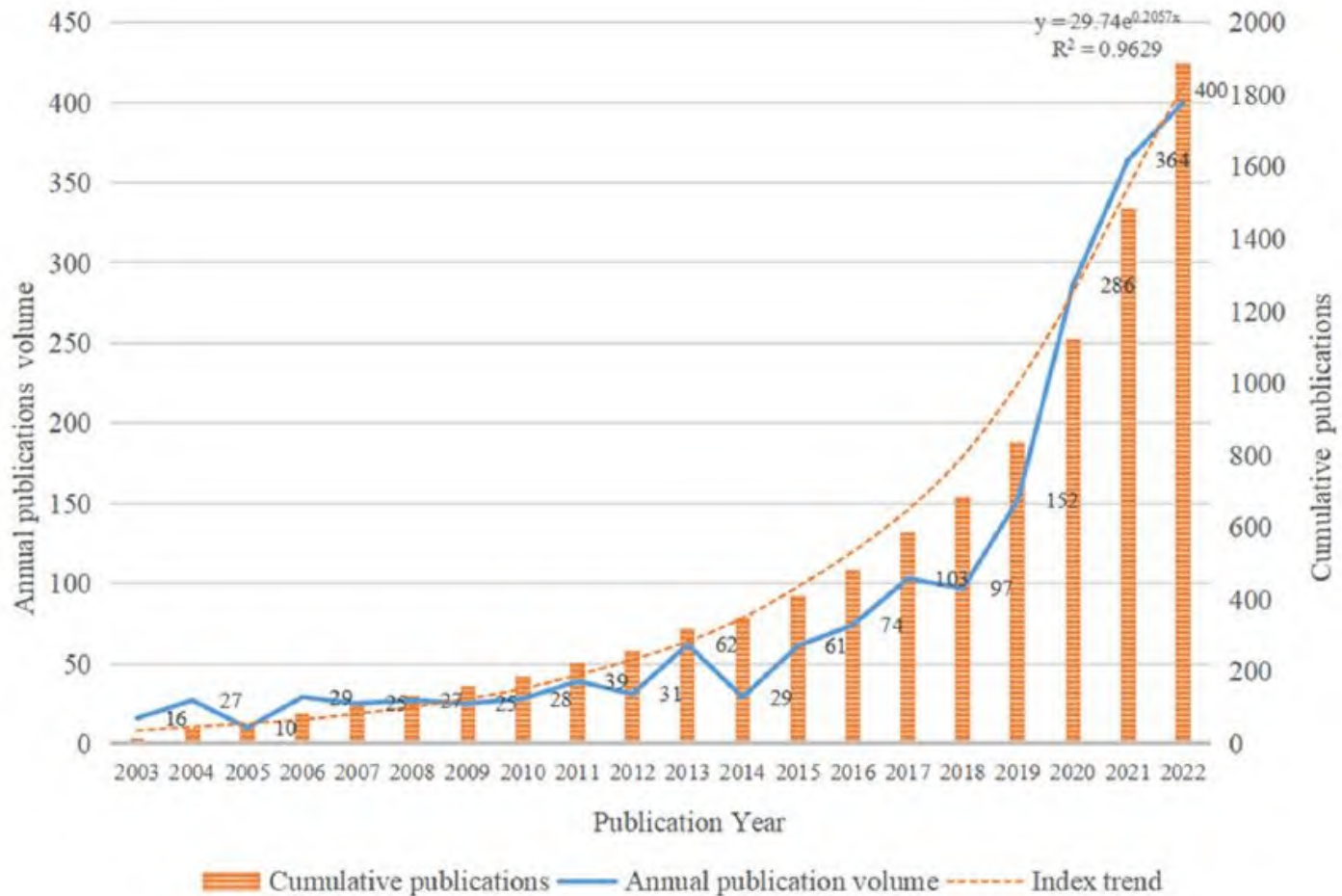


FIGURE 2
Distribution of publications on African swine fever (ASF) from 2003 to 2022.

Yu Z, Xie L, Shuai P, Zhang J, An W, Yang M, Zheng J and Lin H (2023) New perspective on African swine fever: a bibliometrics study and visualization analysis. *Front. Vet. Sci.* 10:1085473. doi:10.3389/fvets.2023.1085473

TABLE 1 The top 11 authors with most publications related to African swine fever (ASF).

Runk	Author	Publications	Percentage	Citations	Average citation	H-index	Location
1	Blome, sandra	75	3.98	1,903	25.37	24	Germany
2	Dixon, linda k.	64	3.40	4,138	64.66	40	United Kingdom
3	Gallardo, carmina	55	2.92	2,779	50.53	34	Spain
4	Borca, manuel v.	44	2.33	1,316	29.91	20	United States
5	Gladue, douglas p.	43	2.28	1,270	29.53	19	United States
6	Sanchez-vizcaino, jose manuel	42	2.23	1,717	40.88	30	Spain
7	Beer, martin	34	1.80	1,186	34.88	17	Germany
8	Stahl, karl	34	1.80	939	27.62	16	Sweden
9	Wozniakowski, grzegorz	34	1.80	718	21.12	16	Poland
10	Alonso, covadonga	30	1.59	1,278	42.60	20	Spain
11	Ramirez-medina, elizabeth	30	1.59	477	15.90	12	United States

Yu Z, Xie L, Shuai P, Zhang J, An W, Yang M, Zheng J and Lin H (2023) New perspective on African swine fever: a bibliometrics study and visualization analysis. *Front. Vet. Sci.* 10:1085473. doi:10.3389/fvets.2023.1085473

TABLE 3 The top 10 countries/regions with most publications related to ASF.

Runk	Countries/ regions	Publications	Citations	Average citation	H- index	Status of the corresponding author's country/region				
						Publications	Percentage	SCP	MCP	MCP Ratio
1	China	401	4,965	12.38	36	374	19.84	325	49	13.10
2	United States	353	7,872	22.30	47	238	12.63	153	85	35.71
3	Spain	312	11,387	36.50	58	224	11.88	136	88	39.29
4	United Kingdom	252	9,661	38.34	53	139	7.37	62	77	55.40
5	Germany	167	4,138	24.78	37	107	5.68	63	44	41.12
6	France	125	4,029	32.23	32	56	2.97	21	35	62.50
7	Italy	112	2,546	22.73	30	62	3.29	37	25	40.32
8	South Africa	90	3,386	37.62	31	49	2.60	17	32	65.31
9	Poland	75	1,531	20.41	22	51	2.71	46	5	9.80
10	Kenya	72	1,955	27.15	26	22	1.17	2	20	90.91

SCP, single country/region publications; MCP, multiple country/region publications.

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TABLE 4 The top 10 productive institutions ranked by number of publications related to ASF.

Runk	Institutions	Publications	Percentage	Citations	Average citation	H-index	Region
1	Chinese Acad Agr Sci	115	6.10	1,874	16.30	21	China
2	Friedrich Loeffler Inst	102	5.41	2,700	26.47	27	Germany
3	Pirbright Inst	88	4.67	3,147	35.76	32	England
4	Kansas State Univ	80	4.24	2,081	26.01	27	United States
5	Univ Pretoria	74	3.93	3,188	43.08	31	South Africa
6	Univ Complutense Madrid	66	3.50	2,664	40.36	31	Spain
7	Univ Autonoma Madrid	53	2.81	2,017	38.06	28	Spain
8	ARS (USDA)	50	2.65	1,646	32.92	23	United States
9	CSIC	46	2.44	1,144	24.87	20	Spain
10	Int Livestock Res Inst	44	2.33	1,097	24.93	20	Kenya/Ethiopia

Yu Z, Xie L, Shuai P, Zhang J, An W, Yang M, Zheng J and Lin H (2023) New perspective on African swine fever: a bibliometrics study and visualization analysis. *Front. Vet. Sci.* 10:1085473. doi:10.3389/fvets.2023.1085473

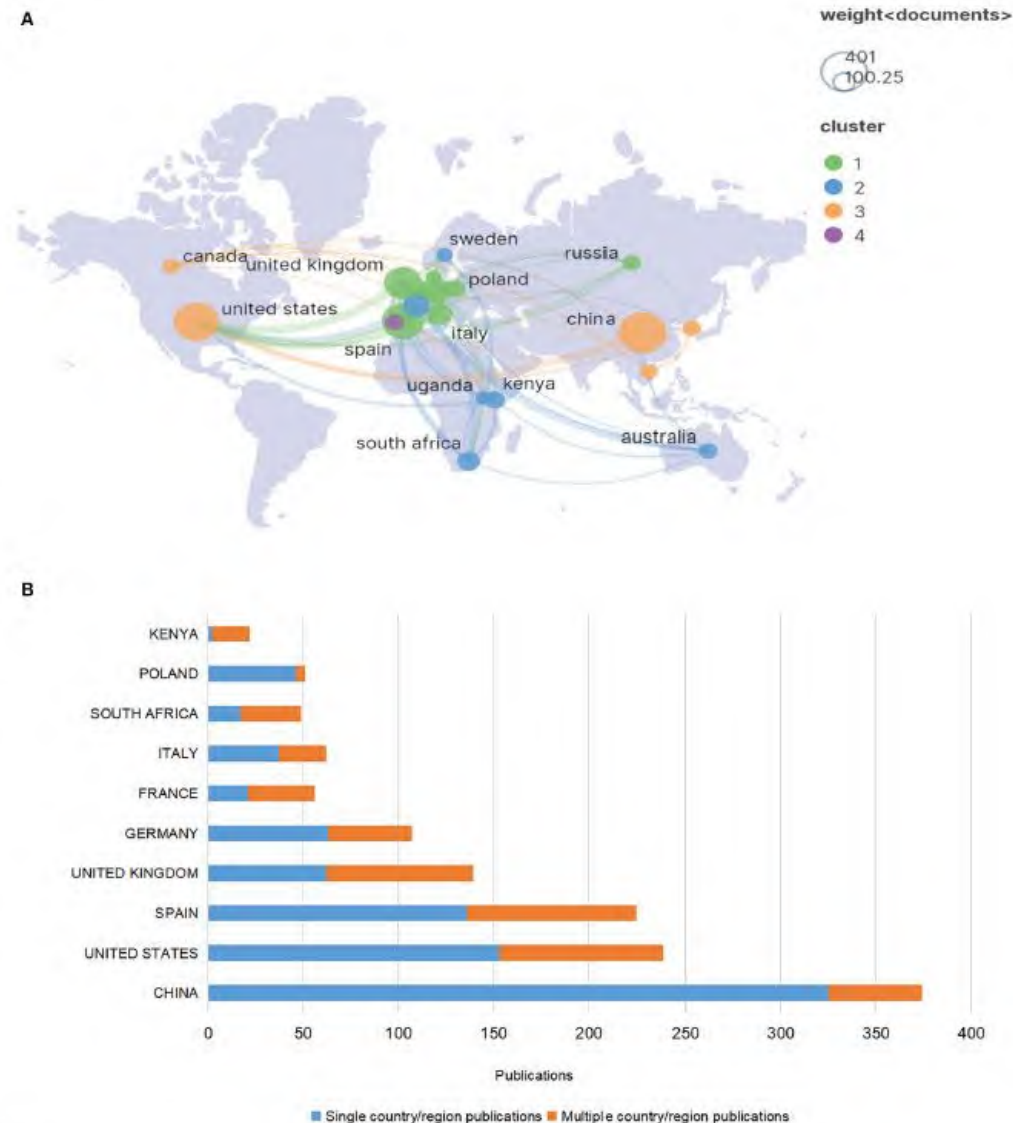


FIGURE 4

(A) The geographical distribution and collaboration map of the top 20 countries/regions with publications related to ASF. (B) Multi-country collaboration in the corresponding author's country/region.

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African Swine Fever Gap Analysis

Workshop Report

April 2018



Global African Swine Fever
Research Alliance

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2022 African Swine Fever Virus

Research Review

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Commissioned by

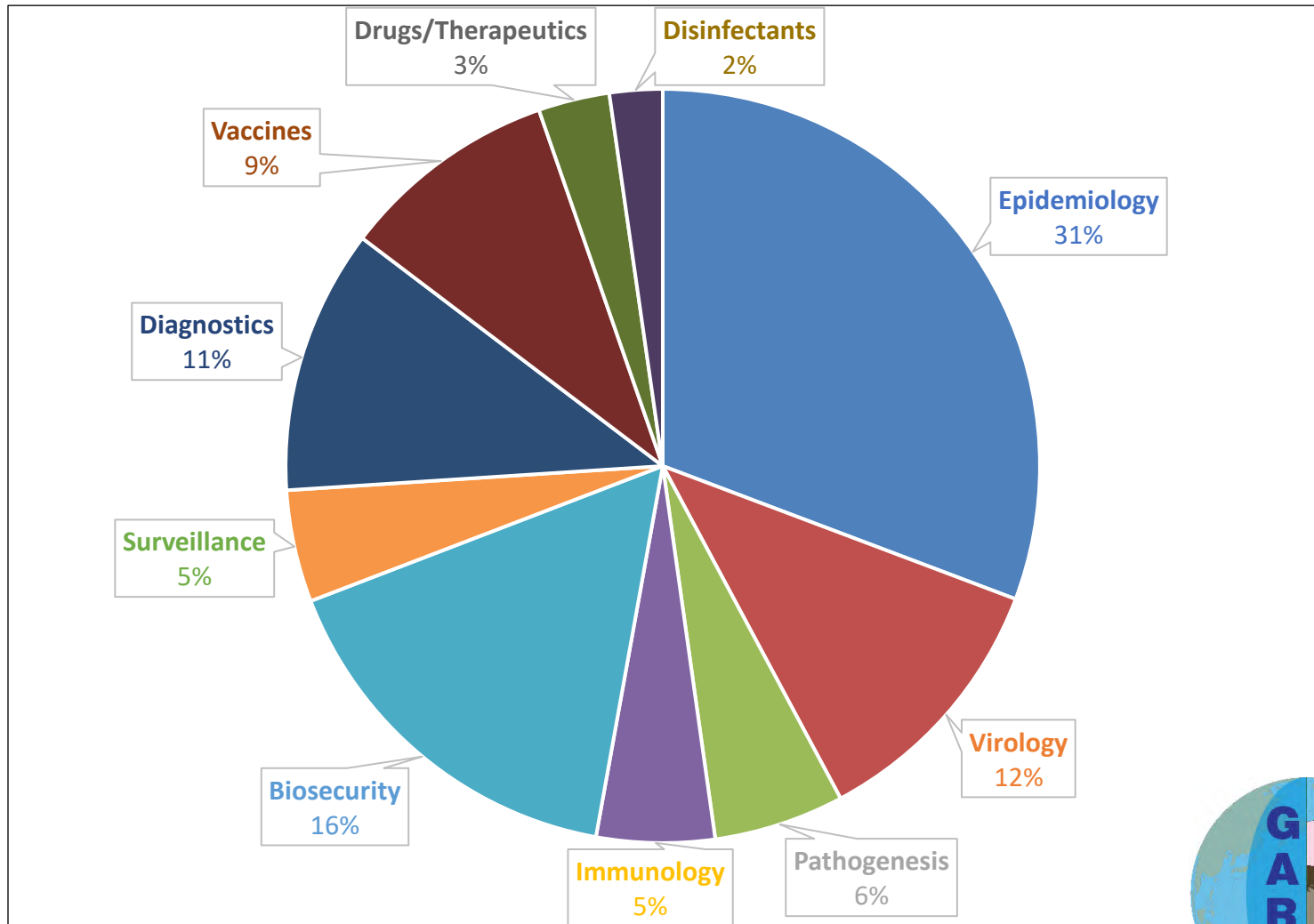


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In collaboration with



Selected papers by field



2022 ASFV Research Review - key points

- Since 2015, ASFV has spread into Western Europe and across East/Southeast Asia (including China in 2018).
- In 2021, ASFV was detected in the Dominican Republic and Haiti.
- ASFV transmission patterns are variable and depend on the environment, farms, and host animal populations.
- Human activity continues to play a major role in the spread and maintenance of ASF in Europe, Asia, and Africa.



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2022 ASFV Research Review - key points

- Virological studies are elucidating the functions of the ASFV proteome, but many proteins remain uncharacterized.
- Specific viral proteins have been linked to modulation of autophagy, host cell metabolism, and immune-related signaling pathways.
- Viral immune evasion has been studied intensively, identifying proteins partially responsible for cytokine inhibition, apoptosis regulation, and MHC protein expression.
- Determinants of immunologically homologous vs. heterologous strains continue to be studied.



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2022 ASFV Research Review - key points

- Risk assessments and biosecurity meta-analyses are testing the many different ASF control measures in use around the globe.
- New computational models and surveillance programs are expanding our ability to monitor the spread of ASFV in domestic and wild swine populations.
- Many new methods have been developed for ASF diagnosis in domestic and wild animals, with a growing emphasis on penside tests.



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2022 ASFV Research Review - key points

- Several promising live-attenuated ASFV vaccine candidates have been developed, aided by the identification of critical immunomodulatory viral proteins.
 - Limited advances have also been made toward subunit vaccination strategies.
 - Potential DIVA (differentiating infected from vaccinated animals) markers have been identified.
 - Stable cell lines for virus isolation and efficient ASFV vaccine production have been reported.



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2022 ASFV Research Review - key points

- Research is ongoing into anti-ASFV drugs and therapeutics, aided by advancements in structural biology.
- Studies are testing the validity of commercial disinfectants under field conditions (e.g., on relevant substrates like concrete or surfaces contaminated with organic matter).



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Gap Analysis

- What are the knowledge gaps?
- What are the priority veterinary medical countermeasures to control ASF in your country?
- What do we need from veterinary medical countermeasures to successfully prevent, control, and where feasible, eradicate ASF?
- What are the research priorities today?



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Thank you!



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Fighting African Swine Fever Together

www.ars.usda.gov/GARA