



Basem Mohamed Abdelhamid Ahmed

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EDUCATION/ QUALIFICATIONS

- **PhD of Veterinary Medical Sciences (Virology)** February 2012- January 2016
Faculty of Veterinary Medicine, Cairo University, Egypt
Thesis title: **Preparation and Efficacy of rH5-DNA Vaccine against Highly Pathogenic AIV H5N1 in a Prime-Boost Concept**
- **Master of Veterinary Medical Sciences (Virology)** September 2008- February 2012
Faculty of Veterinary Medicine, Cairo University, Egypt
Thesis title: **Sequence Analysis and Preparation of DNA Vaccine for Equine Influenza Virus (H3N8) isolated in Egypt, 2008**
- **Bachelor of Veterinary Medical Sciences** September 2002- June 2007
Faculty of Veterinary Medicine, Cairo University, Egypt.
First 2% of the class.

PROFESSIONAL EXPERIENCE

- **Professor of virology (Associate)** July 2021- present
Faculty of Veterinary Medicine, Cairo University, Egypt.
- **Lecturer of virology** May 2016- July 2021
Faculty of Veterinary Medicine, Cairo University, Egypt.
- **Assistant Lecturer of virology** April 2012- May 2016
Faculty of Veterinary Medicine, Cairo University, Egypt.
- **Demonstrator of Virology** April 2008 - April 2012
Faculty of Veterinary Medicine, Cairo University, Egypt.

OTHER WORK EXPERIENCE

- **Chief technical officer (poultry vaccines)** 2019- present
EgyVac (Sole Agent of BioTestLab.ua), Tanta, Egypt.
- **R&D consultant/ Manager** 2017-2020
Vaccine Valley, 6th of October, Egypt.
- **Technical Director (poultry vaccines)** 2016-2019
MargVac (distributor for Indovax and Hester vaccines), Minia, Egypt.
- **Scientific sales representative** 2007-2008
Sigma Scientific Services, El-Maadi, Egypt.

ACADEMIC/TEACHING EXPERIENCES

A) Courses taught:

Graduate

1. Course coordinator for Molecular Virology (VIR-2071), Viruses of wild animals and birds (VIR-3177), Advanced general virology (VIR-4175) **2021- present**.
2. Participated actively as an instructor/ mentor in lectures and practical sessions of all Virology courses for diploma, Masters, and PhD programs

Undergraduate

1. course coordinator for Virology (PHA-251), **2021- present**.
2. Participated actively in lecturing and supervising practical sessions for all virology under graduate courses **2016- present**
3. Molecular Biology Course 155 (Practical sessions and lab instructions): **2014-2016**

B) Education Technology:

Teaching Methods:

Group discussion, group activities, presentation, demonstration and problem-solving, **hybrid teaching, online meetings.**

Teaching Materials:

White boards, interactive boards, video projectors, teaching microscopes and **web-enabled e-learning.**

TECHNICAL/RESEARCH SKILLS

DNA/RNA: Nucleic acid extraction, PCR, qPCR, RFLP, PCR clean up, gel purification and analysis. RPA, RT-RPA. Sequence and phylogenetic analysis. Cloning and related Protocols. In-vitro expression of viral proteins. Oxford nanopore sequencing technology **MinION**.

Protein: Protein detection and quantitation, SDS-PAGE analysis, Western blot assay.

Virus: Virus isolation and propagation, Infectivity titration.

Cell culture: Different types of cell lines (suspension and adherent), Preparation of cell culture media, Virus inoculation on cell culture, Cell cytotoxicity, Transient expression in mammalian, and insect cell culture, testing antiviral activity of medicinal plants.

Serology and immunology: ELISA, Immunofluorescence, Virus Neutralization Assay, Hemagglutination and Hemagglutination Inhibition, immunodiffusion tests.

Vaccines: live and inactivated vaccine design, production, evaluation in vitro and in field settings. DNA vaccines, baculovirus vaccines, molecular based vaccines.

PROFESSIONAL ACTIVITIES/ DEVELOPMENT

Training Abroad

1. Cloning and mutagenesis techniques used to manipulate EHV-1 genome. **April 8-12, 2019**, Institut für Virologie (**OIE-reference laboratory for equine herpesviruses and equine influenza virus**), **Freie Universität Berlin, Germany**, funded by an **Erasmus+ mobility grant**.

Conferences and Symposia

1. The 11th scientific conference of the **Egyptian veterinary poultry association (EVPA)**. Held in Porto Marina Resort & Spa- North coast, Egypt. **20-23 April 2019**.
2. The 7th international conference of the **Egyptian society of virology**, held in Desert Rose resort- Hurghada, Egypt, **26-30 November 2018**. (Organizing committee member)
3. AAALAC regional conference Egypt 2018 entitled “**implementation of international research animal care practices**”, held in Al-Masah, Nasr City, Cairo, Egypt **23-24 April 2018**.
4. The 10th scientific conference of the **Egyptian veterinary poultry association (EVPA)**. Held in Stella Di Mare Grand hotel- El-Sokhna, Egypt. **4-7 December 2017**.
5. The 14th scientific conference (6th international) of the faculty of veterinary medicine, **Cairo University**. Held in Sharm El-Sheikh, Egypt. **28-31 January 2017**. (Organizing committee member)
6. The 6th international conference of the **Egyptian society of virology**, held in Desert Rose resort- Hurghada, Egypt, **29 November-2 December 2016**. (Organizing committee member, awarded best scientific presentation award)
7. The 5th international conference of the **Egyptian society of virology**, held in Serenity Beach Makadi Hotel- Hurghada, Egypt, **9-12 December 2014**.
8. The 4th international Conference of the **Egyptian Society of Virology**, Held in KairoSeiz Parkland Hotel- Sharm El-Sheikh, Egypt, **14-16 November 2012**.
9. The 11th scientific (3rd international) conference of the faculty of veterinary medicine, **Cairo University**, Held in Cairo and Hurghada, Egypt, **15-18 May 2011**.
10. The 3rd international Conference of the **Egyptian Society of Virology**, Held in Cairo University conference center, Egypt, **24-25 November 2010**.
11. The 10th scientific (2nd international) conference of the faculty of veterinary medicine, **Cairo University**, Held in Cairo and Hurghada, Egypt, **19-22 October 2009**.

List of Publications (key publications):

Scopus author identifier: [56112127300](https://orcid.org/0000-0001-8541-7953), ORCID: <https://orcid.org/0000-0001-8541-7953>

1. **Initial Evidence That Gilthead Seabream (*Sparus aurata*L.) Is a Host for Lymphocystis Disease Virus Genotype I**, Mohamed Shawky, Engy Taha, [Basem Ahmed](#), Mahmoud Aly Mahmoud, Mohamed Abdelaziz, Mohamed Faisal, Ausama Yousif (**Animals 2021,11, 3032**)
2. **Insights into the Genetic Evolution of Duck Hepatitis A Virus in Egypt**, Mohammed A. Rohaim, Rania F. El Naggar, Mohammed A. AbdelSabour, [Basem A. Ahmed](#), Mohamed M. Hamoud, Kawkab A. Ahmed, Osama K. Zahran, Muhammad Munir (**Animals 2021, 11, 2741**).
3. **Gallid Alphaherpesvirus 2 in the Egyptian Turkeys: Molecular Characterization and Establishment of a Universal System for Phylogenetic Classification**, Mahmoud M Bayoumi, Mohamed El-Saied, [Basem M Ahmed](#), Magdy El-Mahdy, Haitham M Amer (**Intervirology 2021;64:156–164**)
4. **A Matching Multivalent Vaccine Candidate Combining Velogenic NDV Genotype VII and Variant IBV Protects Chicken from Virulent Challenge and Eliminates Virus Shedding**, Asmaa Shawky, [Basem M. Ahmed](#), Hala M. El-Makaky, Ahmed A. El-Sanousi (**Advances in animal and veterinary sciences, 8(12): 1380-1387, 2020**)
5. **Emergence of viral nervous necrosis is associated with mass mortality in hatchery-reared tilapia (*Oreochromis niloticus*) in Egypt**, Engy Taha, Mohamed Shawky, [Basem](#)

- [Ahmed](#), Mohamed Moustafa, Ausama Yousif & Mohamed Abdelaziz (**Aquaculture international**, 28: 1811–1823, 2020)
6. **Evaluating two approaches for using positive control in standardizing the avian influenza H5 reverse transcription recombinase polymerase amplification assay**, [Ahmed, B.M.](#), Amer, H.A., Kissenkoetter, J., (...), Yousif, A.A., Shalaby, M.A. (**Molecular and Cellular Probes**, 50: 101511, 2020).
 7. **A novel bivalent Pasteurellosis-RHD vaccine candidate adjuvanted with Montanide ISA70 protects rabbits from lethal challenge**, El-Jakee, J.K., Ihab M. Moussab, Mai S. Omran, [Basem M. Ahmed](#), Mahmoud A. Elgamal, Hassan A. Hemeg, Ayman S. Mubarak, Khalid S. Al-Maary, Saleh A. Kabli, Sherif A. Marouf, Jwahrer Haji Alhaaj (**Saudi Journal of Biological Sciences**, 27(3): 996-1001, 2020)
 8. **Improved Bivalent Live and Inactivated Clone 30 and Infectious Bronchitis Virus Vaccine**, Walaa Abd El-fatah, [Basem M. Ahmed](#), Mohamed A. Abd El-Khaleck and Ahmed A. El-Sanousi (**International Journal of Veterinary Science**, 9(1): 50-57, 2020).
 9. **Protective efficacy of combined trivalent inactivated ISA 71 oil adjuvant vaccine against avian influenza virus subtypes (H9N2 and H5N1) and Newcastle disease virus**, Zeinab Mohamed Ali, Mervat Abd El Monaem Hassan, Hussein Ali Hussein, [Basem Mohamed Ahmed](#), and Ahmed Abd El-Ghany El Sanousi, (**Veterinary World**, 10 (10):1212-1220).
 10. **Protective efficacy of a prime-boost protocol using H5-DNA plasmid as prime and inactivated H5N2 vaccine as the booster against the Egyptian avian influenza challenge virus**, H. A. Hussein, [B. M. Ahmed](#), S. M. Aly, A. H. El-Deeb, A. A. El-Sanousi, M. A. Rohaim, A. A. Arafa, M. R. Gadalla, (**Acta Virologica**, 60: 307 – 315, 2016)
 11. **Molecular surveillance on avian influenza in poultry in Egypt**, Shakal MA1, [Ahmed Bassem](#) and Al Baroudi BM1 (published Abstract and poster presentation at GARAD2015, King's College London, 2015).
 12. **Molecular detection and characterization of reticuloendotheliosis virus in broiler breeder chickens with visceral tumors in Egypt**, El-Sebelgy, M. M., [B. M. Ahmed](#), N. S. Ata, and H. A. Hussein, (**International Journal of Veterinary Science and Medicine**, vol. 2, issue 1, pp. 21-26, 2014.).
 13. **Immunogenicity of DNA Plasmid Expressing HA1 of (A/Equine/Egypt/VRLCU/2008 (H3N8)) Equine-1 Influenza Virus in Wistar Rat Model**, [Ahmed, B.M.](#); Hussein, H.A.; and A.A, El-Sanousi, Department of Virology, Faculty of Veterinary Medicine, Cairo University (**International Journal of Virology**, vol. 10, issue 1, pp. 63-69, 2014.).
 14. **Phylogenetic Analysis of Serotype O of FMDV Characterized in Year 2009 in Egypt**, Bazid, A. I., H. A. Hussein, S. S. Balal, A. A. Elsanousi, and [B. M. Ahmed](#) (**International Journal of Virology**, vol. 10, issue 1, pp. 28-36, 2014.).
 15. **Characterization of HPAI H5N1 with acute mortalities in Ostrich in Egypt**, Hussein, H.A., Rohaim, M.A., [Ahmed, B.M.](#) and A.A, El-Sanousi, (published Abstract and poster presentation at Oxford Influenza, 2011).

Organization and/or Instruction at Workshops (Key Items):

1. Invited trainer in **Cairo 3A poultry company** on “**Introduction to major veterinary diagnostic techniques**”, February 29- March 1, 2020. **Cairo 3A Laboratories, Sadat City.**
2. Invited trainer in **Egyptian agricultural organization, El-Zahraa Stud** on “**Equine viral diseases: diagnosis and control**”, February 18-19, 2020. **El-Zahraa Stud.**
3. “Imported and neglected infectious diseases: Joint research forces to fight global problems” **Summer school** between Cairo University, Giza, Egypt. and Georg-August-

University Gottingen, Germany. with the support from Volkswagen Foundation, September 16-27, 2018. **Cairo University.**

4. "Molecular Based Techniques: 1) PCR and RT-PCR assays" **April 11-14, 2010.** Biotechnology Center for services and research (**BCSR**), Faculty of Veterinary Medicine, **Cairo University.**
5. "Application of RT-PCR for Rapid Detection and Genotyping of Avian Influenza" **April 26-28, 2010.** Biotechnology Center for services and research (**BCSR**), Faculty of Veterinary Medicine, **Cairo University.**
6. "Advances in PCR Assay" **November 28-30, 2010.** Biotechnology Center for services and research (**BCSR**), Faculty of Veterinary Medicine, **Cairo University.**
7. "ELISA: Principle and applications" **December 13-14, 2010.** Biotechnology Center for services and research (**BCSR**), Faculty of Veterinary Medicine, **Cairo University.**
8. Several training courses organized by CAAVS, **Certificates in Arabic, 2012- 2015.**

Practical training:

1. **General Session on Intellectual Property in Egypt**, June 28- August 15, 2021. World intellectual property organization (WIPO), online course, Egypt
2. **Managing time and meetings**, April 7-8, 2021. Faculty and Leadership Development Center (FLDC), **Cairo University.**
3. Pandemic Coronavirus (SARS-CoV-2) and its impact on the Environment and society, **January 5, 2021. National Research Center**, Cairo, Egypt.
4. **Critical thinking**, January 4-5, 2021. Faculty and Leadership Development Center (FLDC), **Cairo University.**
5. **Essentials of Integrated Education**, November 25-26, 2020. Faculty and Leadership Development Center (FLDC), **Cairo University.**
6. COVID-19 pandemic: Current research and role of international collaboration, **November 25, 2020. Egyptian society of virology (ESV)**, Cairo, Egypt.
7. **Reverse Genetics Technology: applications and perspectives**, October 13-24, **2019.** Center of Scientific Excellence for Influenza Viruses (CSEIV), **National Research Center**, Cairo, Egypt.
8. **Implementation of International Research Animal Care Practices**, April 22-24, 2018. Faculty and Leadership Development Center (FLDC), **Cairo University.**
9. **Managing Research Teams, August 23-24, 2017.** Faculty and Leadership Development Center (FLDC), **Cairo University.**
10. Controlling viral infections to improve food security and the nutrition of Egypt's poorest communities, **Newton Researcher Links international workshop.** November 21-24, 2016. At the premises of Cairo University Guest House, **Cairo University.**
11. Communicating Science and Academic Research, **17th July 2016.** At the premises of DAAD Cairo, **DAAD Kairo Akademie.**
12. Capacity Development for Internationalization, **5th June 2016.** At the premises of DAAD Cairo, **DAAD Kairo Akademie.**
13. Constructive Evaluation and Feedback on Students Performance, **22nd May 2016.** At the premises of DAAD Cairo, **DAAD Kairo Akademie**
14. Marketing for Higher Education. **19th May 2016.** At the premises of DAAD Cairo, **DAAD Kairo Akademie.**

15. Change Management in Higher Education, **7th & 8th March 2016**. At the premises of DAAD Cairo, **DAAD Kairo Akademie**.
16. Strategic steering with the Balanced Scorecard, **6th March 2016**. At the premises of DAAD Cairo, **DAAD Kairo Akademie**.
17. Communication skills, **10-11 February 2016**. Faculty and Leadership Development Center (FLDC), **Cairo University**.
18. Self-Marketing, **29th October 2015**. At the premises of DAAD Cairo, **DAAD Kairo Akademie**
19. Principles of assessment, **8th October 2015**. At the premises of at the premises of DAAD Cairo, **DAAD Kairo Akademie**
20. Scientific thinking and argumentation skills for problem solving, by **DAAD Kairo Akademie, 29th July 2015**. At the premises of Faculty of Commerce and Business Administration- Helwan university.
21. A Practical Tour of Bioinformatics Tools, Making sense of your sequences: from raw sequence data to meaningful sequence information, **by the dept. of Virology- FVMCU, 29th June 2015**.
22. Managing Innovation in Academia, by **DAAD Kairo Akademie, 28th May 2015**. At the premises of Faculty of Commerce and Business Administration- Helwan university.
23. Designing scientific posters, by **DAAD Kairo Akademie, 15th October 2014**. At the premises of Cairo University- Faculty of veterinary medicine.
24. Quality standards in teaching, **3-5 September 2014**. Faculty and Leadership Development Center (FLDC), **Cairo University**.
25. Proposal writing GERLS, by **DAAD Kairo Akademie, 17th April 2014**. At the premises of Cairo University- Faculty of veterinary medicine.
26. Communicating science and academic research, **25th March 2013**. At the premises of At the premises of DAAD Cairo, **DAAD Kairo Akademie**
27. Application of mobile recombinase polymerase amplification (RPA) for the rapid diagnosis of relevant viruses in veterinary medicine, **17-19 March 2013**. Department of virology, **Faculty of Veterinary Medicine, Cairo University, Egypt** in cooperation with the Institute of Virology, **University Medical Center Gottingen, Germany**.
28. Dealing with Change, **5th March 2013**. **The DAAD Kairo Akademie**, at the premises of Vet. Med. Faculty – Cairo University.
29. Managing Conflicts using Constructive Negotiation Techniques, **4th March 2013**. **The DAAD Kairo Akademie**, at the premises of Vet. Med. Faculty – Cairo University.
30. Improving Cross Cultural Competence, **3rd March 2013**. **The DAAD Kairo Akademie**, at the premises of Vet. Med. Faculty – Cairo University.
31. Communication and Rhetorical techniques, **25th February 2013**. At the premises of DAAD Cairo, **DAAD Kairo Akademie**
32. Competing for research funds, **23-25 February 2013**. Faculty and Leadership Development Center (FLDC), **Cairo University**.
33. Exams and Students Evaluation Systems, **10-12 November 2012**. Faculty and Leadership Development Center (FLDC), **Cairo University**.
34. Time Management workshop (6 hrs), **8th November 2012**. Training and Development Unit (TDU), Faculty of veterinary medicine, **Cairo University**.
35. Proposal Wring GERLS, **1st October 2012**. **The DAAD Kairo Akademie**, at Faculty of Agriculture Cairo University, **Library building, 2nd floor**.

36. Properties of Synthesized Silver Colloid and Nanoparticles by Transmission Electron Microscope, 3-4 **September 2012**. Medical Technology Center, Medical research Institute, **University of Alexandria**.
37. PCR Clinic Basic applications and Practices, **29-30 April 2012**. Organized by **Eppendorf Middle East with Trust Medical – Egypt, at Novotel, 6 October City, Egypt**.
38. International Publishing of Research workshop, **19-21 March 2012**. Faculty and Leadership Development Center (FLDC), **Cairo University**.
39. Development of electronic courses design skills, **2-5 October 2011**. Electronic Learning Center (ELC), **Cairo University**.
40. Use of technology in teaching workshop, **22-24 February 2010**. Faculty and Leadership Development Center (FLDC), **Cairo University**.
41. Quality standards in teaching workshop, **17-19 August 2009**. Faculty and Leadership Development Center (FLDC), **Cairo University**.
42. Effective Presentation workshop, **9-11 February 2009**. Faculty and Leadership Development Center (FLDC), **Cairo University**.
43. Code of ethics workshop, **3-5 November 2008**. Faculty and Leadership Development Center (FLDC), **Cairo University**.
44. Research Ethics workshop, **20-22 July 2008**. Faculty and Leadership Development Center (FLDC), **Cairo University**.

RESEARCH/SCHOLARLY ACTIVITIES:

Grants:

- **CO-PI** in the research project accepted by STDF (1.000.000 EGP) entitled “Suitcase laboratory for rapid and sensitive detection of SARS-CoV-2 in point-of-care settings” **2021**.
- **CO-PI** in the research project funded by STDF-RSG (200.000 EGP) entitled “Expression and characterization of Norovirus shell (S) protein in algae for development of immunoassays and vaccines” **2019**.
- **Erasmus+ KA1** mobility training grant (**1200 EUR**) in Germany, Freie Universität Berlin, Institut für Virologie (**OIE-reference laboratory for equine herpesviruses and equine influenza virus**), April 8-12, 2019.
- **PI** in the research project funded by Cairo University (**150.000 EGP**) entitled “Preparation and experimental evaluation of an Equine influenza H3N8 vaccine based on rDNA technology” (**2018**).
- **PI** in the research project funded by STDF-STF (**250.000 EGP**) entitled “Novel Self-biocontained Plant-based Strategy for Overexpression of Biologically Active Equine H3N8 Influenza Virus Proteins” (**2017**).
- **CO-PI** in the research project submitted to Cairo University (**130.000 EGP**) entitled “Development of a competitive internal positive control (CIPC) to improve the Avian influenza H5N1 rapid detection molecular assay” (**2016**).
- Participated in the research team in a research project submitted to Cairo University (**40,000 US\$**) entitled “Preparation of a new vaccine to avian Influenza virus” (**2009**).

Thesis:

- Currently co-supervising 4 Master Students (one has finished) and 2 PhDs (one has finished).

- Assisted in the laboratory guidance and practical follow up of a multitude of Master and PhD theses registered at Virology Department, Faculty of Veterinary Medicine, Cairo University, and many other departments of the faculty. **Acknowledgments** are available upon request.
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COMMUNITY SERVICES

1. Participation in the field services offered by "**Center for Analysis and Applied Veterinary Studies (CAAVS), Faculty of Veterinary Medicine, Cairo University**". Task's descriptions include isolation and identification of different animal and avian viruses, serological monitoring of maternal immunity and vaccine responses and vaccine quality control. **(2008- 2018)**
 2. Participation in the services offered by "**Biotechnology Center for services and research (BCSR), Faculty of Veterinary Medicine, Cairo University**". Task's descriptions include detection and identification of different organisms in clinical samples using conventional and molecular techniques, protein detection, quantitation and profiling, antigen preparation, western blotting, and other techniques. **(2010- present)**
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ACADEMIC/RESEARCH INTERESTS

1. Production of subunit vaccines and improved diagnostic reagents to various animal and poultry viral agents using recombinant proteins expressed by the baculovirus vector system.
 2. Novel diagnostics and improving current diagnostic techniques.
 3. Gene vaccine technology and related topics.
 4. Studying the evolution and molecular phylogeny of local virus strains.
 5. Better understanding of species-specific immune response.
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FOREIGN LANGUAGE ABILITIES/SKILLS

- Arabic: Mother tongue
- English: Very good written and good spoken
- TOFEL training course, center for foreign languages and professional translation (**CLT**), **Cairo university** (25th February 2009 – 11th April 2009).
- Institutional TOEFL, **CLT**, April 2009 (Score **547**).
- Institutional TOEFL, **Amid East**, May 2018 (Score **573**)

COMPUTER SKILLS

- Familiar with the following computer software and applications:
 - ICDL course, Syllabus Version 4 (**Pass**)
 - Microsoft windows 7, 8, 8.1, 10, and office applications.
 - Bioinformatics software (Lasergene, MEGA-X, BioEdit, SnapGene, RDP4).
 - Fair at maintaining both hardware and software.
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Professional memberships (key memberships)

- Egyptian Society of Virology (Since 2008).
 - Egyptian Society of Immunologists (Since 2008).
 - Egyptian veterinary poultry association (since 2016)
 - World Society of Virology (since 2017)
 - International veterinary vaccine network (since 2018)
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PERSONAL INFORMATION

- Born in Embaba, Giza, Egypt on May 24, 1985.
 - Finally exempted from military service.
 - Married and father of 3 children (1 gal and 2 guys).
 - Prose poet with one published collection of Poems.
 - Cultural committee consultant in FVMCU student's Union (2017- present)
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***References and documents are available upon reasonable request.**

****Full version with all publications, courses and memberships is available upon request.**

Basem M. A. Ahmed

December 7, 2021