CURRICULUM VITAE

Name: Anne Elizabeth Simon

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***Education***

1982 Ph.D. Genetics, Indiana University

1978 B.A. Biology, Magna Cum Laude, University of California San Diego

***Postdoctoral Research Experience***

1984-1987 University of California San Diego, NIH Postdoctoral Fellow

1982-1984 Indiana University, Postdoctoral Research Associate

***Professional Experience***

2002- Director, Inter-institutional Virology Program, University of Maryland

2000- Professor, Department of Cell Biology and Molecular Genetics, University of Maryland

1996-2000 Professor, Department of Biochemistry and Molecular Biology, UMass

1996-1999 Associate Head, Department of Biochemistry and Molecular Biology, UMass

1992- 1996 Associate Professor, Department of Biochemistry and Molecular Biology, UMass

1990-1992 Assistant Professor, Department of Biochemistry and Molecular Biology, UMass

1987-1990 Assistant Professor, Department of Plant Pathology, University of Massachusetts

***Honors and Awards***

2014 Elected a Fellow of the American Academy of Microbiology

2012 Nominated for President of the American Society of Virology

2011 Elected Plant Virus Councilor, American Society of Virology

2008 College of Chemical and Life Sciences Annual Service Award

2002 Richard Francki Prize recipient for Distinguished Research in Plant Virology

1997 University of Massachusetts Distinguished Teaching Award

1982 Recipient, Esther L. Kinsley Ph.D. Dissertation Award for the most outstanding Ph.D. thesis at

Indiana University

***Other Recent Professional Activities***

2018 Local organizer for ASV annual meeting at the University of Maryland

2007- Editor, Journal of Virology

2011- Editor, Current Opinion in Virology

2010- Editorial Board, Viruses

2008- Advisory Board, Science and Entertainment Exchange, National Academy of Sciences

2012, 2014 Organizer of plant virology satellite symposium at ASV

2013-2014 Nominations Committee, ASV

2011-2015 co-Editor-in-Chief, Frontiers in Virology

2011- 2014 Plant Virus Councilor, American Society of Virology

2010-2012 American Society of Virology Program Committee

2009-2015 Panel member, National Institutes of Health, Microbiology and Infectious Diseases B

2004-2015 Guest Editor, Current Protocols in Microbiology

1996-2007 Editor, Virology

2008 Panel member, National Institutes of Health, Topics in Virology (R21/R03/R15)

2008 Chairman, Committee of Visitors reviewing the Division of MCB at NSF

2007 External Reviewer, Institute of Plant and Microbial Sciences, National Academy of

Sciences, Taipei, Taiwan

2005 External Reviewer, National Academy of Sciences, Taipei, Taiwan

2003 Panel Member Bard Grant Panel

1998-2003 Panel member, National Institutes of Health, Virology Study Section,

1996-1998 Associate Editor, Molecular Plant-Microbe Interactions

2001 Member, Committee of Visitors reviewing the Arabidopsis genome initiative at NSF

1999Organized the American Society of Virology's Annual Meeting at UMass,

Ad hoc reviewer for National Science Foundation, Department of Energy, USDA, NIH

Reviewer for J. Virol., Virology, J. Gen. Virology, Virus Research, The Plant Cell, The Plant Journal, Plant Physiology, Mol. Gen. Genet., Mol. Cell. Biol., Proc. Natl. Acad. Sci., Plant Molecular Biology, Mol. Plant-Microbe Interact, RNA, EMBO J., Science, Nature Reviews

***Current Grant Support***

1***.*** National Science Foundation MCB-1411836 (Principal Investigator)

Title: Translational Enhancement by Multifunctional tRNA Mimics

Period: 4/1/15 – 3/31/18

Amount: $750,000

2. NIAID R21AI117882-01 (Principal Investigator)

Title: New Paradigms for Ribosome Recoding in (+)Strand Viruses

Period: 3/1/15 - 2/28/18 (includes no-cost extension)

Amount: $409,955

3. National Institutes of Health T32AI125186A (Principal Investigator)

Title: Graduate Training in Virology

Period: 8/1/16-7/31/21

Amount: $ 287,345 (direct costs year 1)

***Recent Past Grant Support***

1. National Science Foundation MCB-1411836 (Principal Investigator)

Title: Analysis of a ribosome-binding 3' translational enhancer in a plus-strand RNA virus

Period: 4/1/12 – 3/31/15

Amount: $595,000

2. National Institutes of Health 2T32AI051967-06A1 (Principal Investigator)

Title: Mechanisms of virus replication and gene expression

Period: 8/1/09-7/31/14

Amount: $997,333

3. National Science Foundation (co-Principal Investigator)

Title: Collaborative research: Identification of *cis*-acting sequence and structural elements required for

replication of a viral RNA

Period: 12/1/09-11/30/13

Amount: 61,392 (to AES)

4. National Science Foundation (Principal Investigator)

Title: Funds for students to attend the American Society of Virology Meeting 2012

Period: 6/2012-6/2013

Amount: $6,000 (to AES)

5. National Institutes of Health 2 R01 GM 061515-05A2/G120CD (Principal Investigator)

Title: Role of RNA structural switches in the replication of a plus-strand RNA virus

Period: 4/1/07 – 3/31/11

Amount: $1,600,000 (includes administrative supplement)

***Recent Invited Presentations at National and International Meetings***

2017 Keynote Speaker Annual meeting of the Mexican Society of Virology (scheduled)

2014 Invited Speaker, 2014 International Symposium on RNA Viruses, Chang Gung University, Taiwan

2013 Invited Speaker, EMBO workshop on plant viruses, France

2011 Keynote speaker, International Symposium on RNA Viruses, Taoyuan, Taiwan

***Recent Invited Seminars at Universities and Industries***

2015 University of South Carolina

2015 Mt. Sinai Medical School

2015 Nanjing University

2015 Chinese Institute of Plant Protection

2015 Peking University

2015 Tsinghua University

2015 Shandong Agricultural University

2015 Zhejiang University

2014 Academy Sinica, Taipei

2014 National Chung Hsing University, Taichung

2014 Keynote Speaker, Johns Hopkins School of Public Health, Dept of Immunology and Molecular

Microbiology Retreat

2014 Keynote Speaker, Mt. Sinai Virology Program Retreat

2013 Chinese Academy of Science

2013 Shandong Agricultural University

2013 Zhejiang University

2013 Chinese Academy of Virology, Wuhan

2012 National Cancer Institute, Fort Detrick

2012 CAS, Virology, Wuhan, China

***Graduate Students***

Ms. Jingyuan (Brianna) Liu PhD program, first year.

Ms. Brianne Temko PhD program, first year.

Dr. My Le PhD, MOCB Current Position- Postdoctoral Associate, Indiana University

Dr. Micki Khulmann PhD, CBMG Current Position- Postdoctoral Associate, National Cancer Institute

Dr. Maitreyi Chattopadhyay PhD, CBMG Current Position- Research Associate, FDA

Dr. Megan Young PhD CBMG Current position- Research Associate, Industry

Dr. Rong Guo PhD CBMG Current position- Permanent staff member, regulatory division, FDA

Dr. John McCormack PhD CBMG Current position- Completed postdoc, Yale University

Dr Fengli Zhang, PhD CBMG Current position- Senior microbiologist, Wisconsin State Laboratory of

Hygiene

Dr. Xiaoping Sun PhD. CBMG Current position- Professor, Wuhan University Medical School

Dr. Jiuchun Zhang, PhD. CBMG Current position- Assistant Scientist, Wisconsin National Primate Research

Center

Dr. Hancheng Guan, Ph.D. Current position- Research Assistant Professor, University of Pennsylvania

Dr. Jianlong Wong, Ph.D. Current position- Assistant Professor, Albert Einstein Medical School

Dr. Chuanzheng Song Ph.D. Last position- Senior scientist, Department of Functional Genetics, Novartis (deceased)

Dr. Jong-Won Oh, Ph.D. Current position- Associate Professor, Biotechnology, Yonsei University

Dr. Qingzhong Kong, Ph.D. Current position- Associate Professor, Case Western University Medical School

Dr. Pamela Cascone, Ph.D. Current position- Senior research scientist, CuraGen Corp, CT

Dr. Chunxia Zhang Ph.D. Current position- Optometrist Bethesda, MD

Dr. Xiao Hua Li, Ph.D. Current position- Research Associate, U. Texas Southwestern Med.

Ms. Angela Valinski, M.A. Current position- Research Technician, Mount Holyoke College.

***Postdoctoral Researchers***

Dr. Zhiyou Du 2015-

Dr. Jared May 2015-

Dr. Feng Gao 2009-

Dr. Vera Stupina 2009-2012

Dr. Xuefeng Yang 2007-2012 Current position: Professor, Shandong Agricultural University

Dr. Kerong Shi 2007-2009 Current position: Associate Professor, Shandong Agricultural University

Dr. Alicia Manfre 2006-2008 Current position: Assistant Professor, Hagerstown Community College

Dr. Guohua Zhang 1999-2006 Current position: Businessman, China

Dr. Sohrab Bodhagi 2000-2001 Current position: Research Consultant, California

Dr. Peter Nagy, Post-doctoral Associate, 1996-1998 Current position, Professor, Department of Plant Pathology, University of Kentucky

Dr. Judit Pogony, Post-doctoral Associate, 1996-1998 Current position, Research Associate, Department of Plant Pathology, University of Kentucky

Dr. Clifford D. Carpenter, Research Associate, 1987-1998 Current position, Senior Research Associate Northwestern University

Dr. Joel Kreps, Post-doctoral Associate, 1992-1996 Current position, Research Manager at BP Biofuels Advanced Technology, San Diego

***Departmental and College Committees at the University of Maryland***

Head, Virology Specialization Graduate Program (2001-)

Organizer of the Annual Virology Program Retreat (2001-)

BISI MCB CA Executive committee (2012-)

Virology position search committee (2015)

Departmental APT Committee (2013)

University Medal Committee (2013)

College APT Committee, vice chair (2012), 2014

Oral Communication Task force, CMNS (2012)

Academic Planning Advisory Committee (APAC) (2010-2012)

Department APT (2008-2011)

College APT Committee, vice chair (2008-2010)

Kirwan Undergraduate Award Committee (2008)

CORE-MIC University Committee (2007-2008)

College Park Scholars Head Search Committee (2008)

College of Life Sciences Search Committee- College Development Officer (2004)

University APT Committee (2004-2005)

Dean's advisory committee (2004-2005)

Kirwan Undergraduate Education Award Committee (2003)

Faculty Senate (2002-2003)

Gemstone mentor (2001-2004)

College Undergraduate education committee (2001)

Department undergraduate education committee (2000-2002)

University Kirwan Research and Scholarship Prize Committee (2001)

Department personnel committee (2001-2003)

New Building committee (2000)

Head, Microbiology SAC (2000)

***Publications***

Peer-Reviewed Journals

1. Bayne, C.F., Widawski, M.E., Gao, F., Masab, M.H., Chattopadhyay, M., Murawski, A.M., Sansever, R.M., Lerner, B.D., Castillo, R.J., Griesman, T.M., Fu, J., Hibben, J.K., Perez, A.D., Simon, A.E., and Kushner, D.B. In vivo SELEX reveals that 5’ domain of Turnip crinkle virus satellite RNA exists in both open and zipped forms. Manuscript in preparation.
2. Gao, F., Alekhina, O.M., Vassilenko, K.S., and Simon, A.E. Non-leaky scanning translation of closely spaced initiation codons for overlapping viral open-reading frames. Manuscript in preparation.
3. Johnson, P., Gao, F., and Simon, A.E. A novel replication element associated with umbravirus Pea Enation Mosaic Virus. Manuscript in preparation.
4. Gao, F., and Simon, A.E. 2017. Differential use of 3’ CITEs by the subgenomic RNA of Pea enation mosaic virus 2. Virology (in press).
5. Du, Z., Alekhina, O.M., Vassilenko, K.S., and Simon, A.E. 2017. Concerted action of two 3’ cap-independent translation enhancers increases the competitive strength of translated viral genomes. Nucleic Acids Res., (in press).
6. Le, M.-T., Kasprzak, W.K., Kim, T., Gao, F., Young, M.Y.L, Yuan, X., Shapiro, B.A., Seog, J., and Simon, A.E. 2017. Combined single molecule experimental and computational approaches for understanding the unfolding pathway of a viral translation enhancer that participates in a conformational switch. RNA Biology (Solicited Point of View), in press. DOI: 10.1080/15476286.2017.1325069
7. Aguado, L.C., Schmid, S., May, J., Sabin, L.R., Panis, M., Blanco-Melo, D., Shim, J.V., Sachs, D., Cherry, S., Simon, A.E., Levraud, J.P. and tenOever, B.R. 2017. Evidence for RNaseIII nucleases as the precursors for eukaryotic antiviral defenses. Nature 547, 114–117
8. Le, M.-T., Kasprzak, W.K., Kim, T., Gao, F., Young, M.Y.L, Yuan, X., Shapiro, B.A., Seog, J., and Simon, A.E. 2017. Folding behavior of a T-shaped, ribosome-binding translation enhancer implicated in a wide-spread conformational switch. eLife 6, e22883. <https://t.co/JwfvZSZOmd>
9. May, J., Johnson, P., Saleen, H., and Simon, A.E. 2017. A sequence-independent, unstructured IRES is responsible for internal expression of the coat protein of Turnip crinkle virus. J Virol [SPOTLIGHT selection] 91, e02421.
10. Kuhlmann, M.M., Chattopadhyay, M., Stupina, V. A., Gao, F., and Simon, A. E. 2016. An RNA element that facilitates programmed ribosomal readthrough in Turnip crinkle virus adopts multiple conformations. J Virol. 90, 8575-8591.
11. Gao, F., and Simon, A. E. 2016. Multiple cis-acting elements modulate programmed-1 ribosomal frameshifting in Pea enation mosaic virus. Nucleic Acids Res 44, 878-895.
12. Le, M.-T., Brown, R. E., Longhini, A. P., Simon, A. E., and Dayie, T. K. 2015. In vivo, site-specific labeling of homogeneous, recombinant RNA in wild type and mutant E. coli for NMR structural studies. Methods Enzymol. 265, 495-535.
13. Chattopadhyay, M., Stupina, V.A., Gao, F., Szarko, C.R., Kuhlmann, M.M., Yuan, X., Shi, K., and Simon, A.E. 2015. Requirement for host RNA silencing components and the virus silencing suppressor when second-site mutations compensate for structural defects in the 3’UTR. J Virol. 89, 11603-11618.
14. Murawski, A.M., Nieves, J.L., Chattopadhyay, M., Young, M.Y., Szarko, C., Tajalli, H.F., Azad, T., Jean-Jacques, N.B., Simon, A.E., and Kushner, D.B. 2015. Rapid evolution of in vivo-selected sequences and structures replacing 20% of a subviral RNA. Virology 483, 149-162.
15. Simon, A.E. 2015. 3’UTR of carmoviruses. Virus Res. 206, 27-36.
16. Dashtia, A., Schwandera, P., Langloisb, R., Funga, R., Lib, W., Hosseinizadeha, A., Liaob, H.Y., Pallensenc, J., Sharmab, G., Stupina, V.A., Simon, A.E., Dinman, J. D., Frank, J., and Ourmazd, A. 2014. Trajectories of the ribosome as a Brownian nanomachine. Proc. Natl. Acad. Sci. USA. 111, 17492–17497
17. Babaie, G., Habibi, M.K., Massah, A., Dizadji, A., Izadinejad, L., and Simon, A. E. 2014. Complete genome sequence and genome analysis of Eggplant mottled dwarf virus-Iranian isolate. ***J. Phytopathol.*** 163, 331-341.
18. Gao, F., Kasprzak, W, Szarko, C, Shapiro, BA, and Simon, AE. 2014. The 3' untranslated region of Pea enation mosaic virus contains two T-shaped, ribosome-binding, cap-independent translation enhancers**. J Virol** 88, 11696-11712. PMCID: PMC4178710
19. Chattopadhyay, M., Kuhlmann, M., Kumar, K., and Simon, A.E. 2014. Position of the kissing-loop interaction associated with PTE-type 3’CITEs can affect enhancement of cap-independent translation. ***Virology***, 458-459, 43-52. PMCID: PMC4101382
20. Gao, F., Reddy, S., Kasprzak, W., Shapiro, B.A., Dinman, J.D., and Simon, A.E. 2013. The kissing-loop T-shaped structure translational enhancer of Pea enation mosaic virus can bind simultaneously to ribosomes and a 5′ proximal hairpin***. J. Virol.*** 87, 11987-2002. PMCID: PMC3807929
21. Simon, A. E., and Miller, W. A. 2013. 3’ Cap-independent translation enhancers of plant viruses. ***Annu. Rev. Microbiol.*** 67: 21–42. PMCID: PMC4034384
22. Stupina, V.A. and Simon, A.E. 2013. Preparation of biologically active Arabidopsis ribosomes and comparison with yeast ribosomes for binding to a tRNA-mimic that enhances translation of plant plus-strand RNA viruses. ***Front. Plant Sci.*** 4, 271. doi: 10.3389/fpls.2013. PMCID: PMC3718319
23. Gao, F., Kasprzak, W., Stupina, V.A., Shapiro, B.A. and Simon, A.E. 2012. A ribosome-binding, 3’ translational enhancer has a T-shaped structure and engages in a long distance RNA:RNA interaction. ***J. Virol.***86, 9828-9842. PMCID: PMC3446580
24. Yuan, X., Shi, K., and Simon, A.E. 2012. An interactive network of RNA elements supports translation and replication in Turnip crinkle virus.  ***J. Virol.*** 86, 4065-4081. PMCID: PMC3318645
25. Guo, R., Meskauskas, A., Dinman, J.D., and Simon, A.E. 2011. Evolution of a helper virus-derived ribosome binding translational enhancer in an untranslated satellite RNA of Turnip crinkle virus. ***Virology*** 419, 10-16. PMCID: PMC3176665
26. Chattopadhyay, M., Shi, K., Yuan, X., and Simon, A.E. 2011. Long-distance kissing loop interactions between a 3’ proximal Y-shaped structure and apical loops of 5’ hairpins enhance translation of Saguaro cactus virus. ***Virology*** 417, 113-125. PMCID: PMC3152624
27. Stupina, V.A, Yuan, X, Meskauskas, A., Dinman. J.D., and Simon, A.E. 2011. Ribosome binding to a 5’ translational enhancer is altered in the presence of the 3’UTR in cap-independent translation of Turnip crinkle virus. ***J. Virol.*** 85, 4638-4653. PMCID: PMC3126203
28. Yuan, X., Shi, K., Young, M. Y. L., and Simon, A. E. 2010. The terminal loop of a 3’ proximal hairpin plays a critical role in the structure of the 3’ region of Turnip crinkle virus and the RdRp-mediated conformational switch. ***Virology*** 402, 271-280. PMCID: PMC2891086
29. Zuo, X, Wang, J., Yu, P., Eyler, D., Xu, H., Starich, M.R., Tiede, D.M., Simon, A.E., Kasprzak, W., Schwieters, C.D., Shapiro, B.A., and Wang, Y.-W. 2010. The cap-independent translational enhancer and ribosome binding structure element in 3' UTR of Turnip crinkle virus RNA folds into a tRNA-like shape in solution. ***Proc. Natl. Acad. Sci. USA*** 107, 1385-1390. PMCID: PMC2803139
30. Cao, M.X., Ye, X.H., Willie, K., Lin, J.Y., Zhang, X.C., Redinbaugh, M.G., Simon, A.E., Morris, T.J., and Qu, F. 2010. The capsid protein of Turnip crinkle virus overcomes two separate defense barriers To facilitate systemic movement of the virus in Arabidopsis. ***J. Virol.*** 84, 7793-7802. PMCID: PMC2897622
31. Yuan, X., Shi, K., Meskauskas, A. and Simon, A.E. 2009. The 3’ end of Turnip crinkle virus contains a highly interactive structure with a translational enhancer that is disrupted by binding to the RNA-dependent RNA polymerase. ***RNA*** 15, 1849-1864. PMCID: PMC2743042
32. Guo, R., Lin, W., Zhang, J., Simon, A. E., and Kushner, D. B. 2009. Structural plasticity and rapid evolution in a viral RNA revealed by *in vivo* genetic selection. ***J. Virol***. 83, 927-939. PMCID: PMC2612397
33. Stupina, V. A., Meskauskas, A., McCormack, J. C., Yingling, Y. G., Kasprzak, W., Shapiro, B. A., Dinman, J. D., and Simon, A. E. 2008. The 3' proximal translational enhancer of Turnip crinkle virus binds to 60S ribosomal subunits. ***RNA*** 14, 2379-2393. PMCID: PMC2578866
34. McCormack, J. C., Yuan, X., Yingling, Y. G., Zamora, R. E., Shapiro, B. A., and Simon, A. E. 2008. Structural domains within the 3' UTR of Turnip crinkle virus.  ***J. Virol.*** 82, 8706-8720. PMCID: PMC2519621
35. Manfre, A. J., and Simon, A. E. 2008. Importance of coat protein and RNA silencing in satellite RNA/virus interactions. ***Virology*** 379, 161-167.
36. Zhang, J., Zhang, G., Guo, R., Shapiro, B. and Simon, A. E. 2006. A pseudoknot in a pre-active form of a viral RNA is part of a structural switch activating minus-strand synthesis. ***J. Virol*** 80, 9181-9191 PMID: 16940529.
37. Zhang, J., Zhang, G., McCormack, J. and Simon, A. E. 2006. Evolution of virus-derived sequences for high level replication of a subviral RNA. ***Virology*** 351, 476-488. PMCID: PMC3176665
38. Sun, X., and Simon, A. E. 2006 A cis-replication element functions in both orientations to enhance replication of *Turnip crinkle virus*. ***Virology*** 352, 39-51. PMCID: PMC2937274
39. Zhang, G., Zhang, J., George, A. T., Baumstark, T., and Simon, A. E. 2006. Conformational changes involved in initiation of minus-strand synthesis of a virus-associated RNA. ***RNA*** 12, 147-162.
40. Zhang, J. and Simon, A. E. 2005. Importance of sequence and structural elements within a viral replication repressor ***Virology*** 333, 301-315.
41. Sun, X., Zhang, G., and Simon, A. E. 2005. Short internal sequences involved in RNA replication and virion accumulation in a subviral RNA of *Turnip crinkle virus*. ***J. Virol.*** 79, 512-524. PMCID: PMC538713
42. Zhang, J., Stuntz, R. M., and Simon, A. E. 2004. Analysis of a viral replication repressor: Sequence requirements in the large symmetrical loop. ***Virology*** 326,90-102.
43. McCormack, J. and Simon, A. E. 2004. Biased hypermutagensis associated with mutations in an untranslated hairpin of an RNA virus. ***J. Virol.*** 78, 7813-7817. PMCID: PMC434097
44. Zhang G, Zhang, J., Simon, A. E. 2004. Repression and derepression of minus-strand synthesis in a plus-strand RNA virus replicon. ***J. Virol.*** 78, 7619-7633. PMCID: PMC434078
45. Zhang, F. and Simon, A.E. 2003. A novel procedure for the localization of viral RNAs in protoplasts and whole plants. ***Plant J.*** 35, 665-673. PMID: 12940959
46. Sun, X., and Simon, A.E 2003. Fitness of a Turnip crinkle virus satellite RNA correlates with a sequence-nonspecific hairpin and flanking sequences that enhance replication and repress accumulation of virions. ***J. Virol.*** 77, 7880-7889. PMCID: PMC161943
47. Zhang, F. and Simon, A.E. 2003. Enhanced viral pathogenesis associated with a virulent mutant virus or a virulent satellite RNA correlates with reduced virion accumulation and abundance of free coat protein. ***Virology*** 312, 8-13. PMID: 12890616
48. Zhang, G. and Simon, A. E. 2003. A multifunctional turnip crinkle virus replication enhancer revealed by in vivo functional selex. ***J. Mol. Biol.*** 326, 35-48. PMID: 12547189
49. Nagy, P. D., Pogany, J., and Simon, A. E. 2001. In vivo and in vitro characterization of an RNA replication enhancer in a satellite RNA associated with Turnip crinkle virus: comparison of sequences and structures stimulating primer-dependent and primer-independent RNA synthesis. ***Virology* 288**,315-324**. PMID: 11601903**
50. Guan, H and Simon, A. E. 2000. Polymerization of non-template bases prior to transcription initiation by an RNA-dependent RNA polymerase: A novel activity involved in 3’-end repair of viral RNAs. ***Proc. Natl. Acad. Sci.*** **97**, 12451-12456.
51. Wang, J. and Simon, A. E. 2000. 3’-end stem-loops of the subviral RNAs associated with turnip crinkle virus are involved in symptom modulation and coat protein binding. ***J. Virol****.* **74**, 6528-6537. PMID: 10864666
52. Yoshinari, S., Nagy, P. D., Simon, A. E., and Dreher, T. W. 2000. CCA initiation boxes without unique promoter elements support in vitro transcription by three viral RNA-dependent RNA polymerases.. ***RNA* 6**, 698-707. PMID: 10836791
53. Guan, H., Carpenter, C. D., and Simon, A. E. 2000. Requirement of a 5’-proximal linear sequence on minus strands for plus-strand synthesis of a satellite RNA associated with TCV. ***Virology* 268**, 355-363. PMID: 10704343
54. Guan, H., Carpenter, C. D., and Simon, A. E. 2000. Analysis of cis-acting sequences involved in plus-strand synthesis of a TCV-associated satellite RNA identifies a new carmovirus replication element. ***Virology*** **268**, 345-354. PMID: 10704342
55. Nagy, P. E., Pogany, J., and Simon, A. E. 1999. RNA elements required for RNA recombination function as replication enhancers in vitro and in vivo in a plus strand RNA virus. ***EMBO J*** **18**, 5653-5665. PMID: 10523308
56. Wang, J. and Simon, A. E. 1999. Symptom Attenuation By A Satellite RNA In Vivo Is Dependent On Reduced Levels of Virus Coat Protein. ***Virology* 259**, 234-245. PMID: 10364508
57. Wang, J., Carpenter, C. D., and Simon, A. E. 1999. Minimal sequence and structural requirements of a subgenomic RNA promoter for turnip crinkle virus. ***Virology*** **253**, 327-336. PMID: 9918891
58. Nagy, P. D., and Simon, A. E. 1998. In vitro characterization of late steps of RNA recombination in turnip crinkle virus I: role of the motif1-hairpin structure. ***Virology*** **249**, 379-392. PMID: 9791030
59. Nagy, P. D., and Simon, A. E. 1998. In vitro characterization of late steps of RNA recombination in turnip crinkle virus II: role of the priming stem and flanking sequences. ***Virology*** **249**, 393-405. PMID: 9791029
60. Carpenter, C. D., and Simon, A. E. 1998. Analysis of sequences and putative structures required for viral satellite RNA accumulation by in vivo genetic selection. ***Nucleic Acids Res.*** 26, 2426-2432. PMID: 9580696
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62. Guan, H., Song, C., and Simon, A. E. 1997. RNA promoters located on (-)-strands of a subviral RNA associated with turnip crinkle virus. ***RNA*** **3**, 1401-1412. PMID: 9404891
63. Stupina, V., and Simon, A. E. 1997. Analysis in vivo of turnip crinkle virus satellite RNA C variants with mutations in the 3' terminal minus strand promoter. ***Virology***  **238**, 470-477. PMID: 9400619
64. Kong, Q., Oh, J.-W., Carpenter, C. D. and Simon, A. E. 1997. The coat protein of turnip crinkle virus is involved in subviral RNA-mediated symptom modulation and accumulation.  ***Virology*** **238**, 478-485. PMID: 9400620
65. Kong, Q., Wang, J., and Simon, A. E. 1997. Satellite RNA-mediated resistance to turnip crinkle virus in Arabidopsis involves a reduction in virus movement. ***Plant Cell*** **9**, 2051-2063. PMID: 9401127
66. Wang, J. and Simon, A. E. 1997. Analysis of the two subgenomic RNA promoters for turnip crinkle virus in vivo and in vitro. ***Virology*** **232**, 174-186. PMID: 9185601
67. Kreps, J. A, and Simon, A. E. 1997. Environmental and genetic effects on circadian regulated gene expression in Arabidopsis thaliana. ***Plant Cell*** **9**, 297-304 PMID: 9090876
68. Nagy, P. D., Carpenter, C. D., and Simon, A. E. 1997. A novel 3' end repair mechanism in an RNA virus. ***Proc. Natl. Acad. Sci. USA.*** 94, 1113-1118. PMID: 9037015
69. Carpenter, C. D., and Simon, A. E. 1996. In vivo repair of 3'-end deletions in a TCV satellite RNA may involve two abortive synthesis and priming events. ***Virology*** **226**, 153-160. PMID: 8955033
70. Carpenter, C. D. and Simon, A. E. 1996. Changes in locations of crossover sites over time in de novo generated RNA recombinants. ***Virology*** **223**, 165-173. PMID: 8806550
71. Carpenter, C. D. and Simon, A. E. 1996. In vivo restoration of biologically active 3' ends of virus-associated RNAs by non-homologous RNA recombination and replacement of a terminal motif.  ***J. Virol.* 70**, 478-486. PMID: 8523561
72. Song, C. and Simon, A. E. 1995. Requirement of a 3'-terminal stem-loop in in vitro transcription by an RNA-dependent RNA polymerase. ***J. Mol. Biol.*** **254**, 6-14. PMID: 7473759
73. Kong, Q., Oh, J.-W., and Simon, A. E. 1995. Symptom attenuation by a normally virulent satellite RNA of turnip crinkle virus is associated with the coat protein open reading frame. ***Plant Cell***  **7**, 1625-1634. PMID: 9750054
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Media Credit:

Story credit for X-Files miniseries episode 6 “My Struggle II”. Story by Anne Simon, Margaret Fearon, and Chris Carter. Written and Directed by Chris Carter. Ten Thirteen Studios Production, FOX Entertainment. Aired Feb 22, 2016

Broader Impact (recent):

1993-2016 Science adviser for the TV series “The X-Files”

2015 Featured speaker at the Smithsonian

Radio interview for BBC

Radio interview for WTOP

Featured story in Washington Post (full page story)

Featured story in Vice.com

2016 Interviews with Popular Science, Buzzfeed, Vice, and Geekwire.

Featured story in Nature Communication

Featured story in Smithsonian Magazine

Talk in the Smithsonian Science Series (277 audience)

Interview (1 h) with Eric Olsen and Joel Sturgis on After Hours AM/America's Most Haunted

Radio (audience of 500,000+)

Seminar at NASA

Seminar at OASIS (life-long learning), Washington DC

Seminar at National Museum of Health and Medicine, Washington DC

Science adviser to movie, Fantastic Voyage

4/6/2016 Invited Participant, White House Office of Science and Technology Policy Roundtable on “The Image of STEM-Emerging Opportunities for Storytelling to Help Inspire a Diverse Generation of Scientists and Engineers”

7/2/2016 Invited participant by National Academy of Science, panel for Science Fiction Museum convention on Science in the Media

Some of the venues where I gave presentations are: NASA, OASIS (life-long learning), National Museum of Health and Medicine, and the Smithsonian. In addition, I gave interviews (many as podcasts) to The Washington Post, BBC, WTOP, Vice.com, Nature Communications, Smithsonian Magazine, and America’s Most Haunted Radio (audience of 500,000+). I also was a participant in the White House Office of Science and Technology Policy Roundtable on “The Image of STEM-Emerging Opportunities for Storytelling to Help Inspire a Diverse Generation of Scientists and Engineers” and the National Academy of Science, panel for Science Fiction Museum convention on Science in the Media. In all of these venues, I emphasized the importance of basic research, the importance of GMOs for crop improvements, and other scientific topics. As a member of the National Academy Science and Entertainment Exchange, I have been giving scientific advice to the movie, Fantastic Voyage. In addition, given the importance of communicating science to the public, I have been very active on Twitter. My current followers (over 2900) are mainly non-scientists and many have been fascinated by the science stories that I tweet out. It is critically important for the future that scientists are humanized and looked up to an individuals with impeccable ethics. Twitter is an important tool in this effort. Over the past year, I have sent out over 5,000 tweets.