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Employment

Wellcome Trust Senior Research Fellow

Chemistry
University of York
Heslington, York
1 Oct 2009 → 30 Sept 2012

Professor

Professor
Chemistry
University of York
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Professor

Professor
Chemistry
University of York
Heslington, York
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Wellcome Senior Research Fellow

Senior researcher
Chemistry
University of York
Heslington, York
1 Aug 2002 → 30 Sept 2009

Research Fellow

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1 Aug 1998 → 31 Jul 2002

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Professor
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1 Oct 2009 → 30 Sept 2012

Research output

AURKB-driven dissolution of CIZ1–RNA assemblies from the inactive X chromosome in mitosis

Byrom, L., Turvey, G. L., Dowle, A. A., Thomas, M., Shirodkar, N., Green, B. J., Brown, M., Ball, C., Chapman, K. E., Guglielmi, E., Dickson, W., Noon, E., Sofi, S., Ainscough, J. F. X., Antson, A. A. & Coverley, D., 10 Feb 2026, In: Nucleic Acids Research. 54, 3, 19 p., gkag018.

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Surface microlayer-mediated virome dissemination in the Central Arctic

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Jorvik: a membrane-containing phage that will likely found a new family within Vinavirales

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Insights into a viral motor: the structure of the HK97 packaging termination assembly

Hawkins, D. E. D. P., Bayfield, O. W., Fung, H. K. H., Grba, D. N., Huet, A., Conway, J. F. & Antson, A. A., 21 Jul 2023, In: *Nucleic Acids Research*. 51, 13, p. 7025-7035 11 p.

Structural atlas of a human gut crassvirus

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Cryo-EM structure in situ reveals a molecular switch that safeguards virus against genome loss

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An Unprecedented Octahedral Trifluoromagnesate MgF₃(Wat)– Transition State Analog Reveals The Molecular Mechanism of ATP Hydrolysis by Zika Virus Helicase

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Anti-TRAP protein from *Bacillus subtilis*: crystallization and internal symmetry

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Single stranded RNA binding proteins

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Structure of the trp RNA-binding attenuation protein, TRAP, bound to RNA

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Steinhoff, H. J., Radzwill, N., Thevis, W., Lenz, V., Brandenburg, D., Antson, A., Dodson, G. & Wollmer, A., Dec 1997, In: *Biophysical Journal*. 73, 6, p. 3287-3298 12 p.

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Okorokov, A. L., Panov, K. I., Offen, W. A., Mukhortov, V. G., Antson, A. A., Karpeisky, M. Y., Wilkinson, A. J. & Dodson, G. G., Mar 1997, In: *PROTEIN ENGINEERING DESIGN*. 10, 3, p. 273-278 6 p.

Crystallographic study of tyrosine phenol-lyase from *Erwinia herbicola*

Pletnev, S. V., Antson, A. A., Sinitsyna, N. I., Dauter, Z., Isupov, M. N., Hurs, E. N., Faleev, N. G., Wilson, K. S., Dodson, G., Demidkina, T. V. & Arutyunyan, E. G., 1997, In: *CRYSTALLOGRAPHY REPORTS*. 42, 5, p. 809-819 11 p.

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Gollnick, P., Baumann, C., Yang, M., Otridge, J. & Antson, A., 1995, In: Nucleic acids symposium series. 33, p. 43-5 3 p.

11-FOLD SYMMETRY OF THE TRP RNA-BINDING ATTENUATION PROTEIN (TRAP) FROM BACILLUS-SUBTILIS DETERMINED BY X-RAY-ANALYSIS

ANTSON, A. A., BRZOZOWSKI, A. M., DODSON, E. J., DAUTER, Z., WILSON, K. S., KURECKI, T., OTRIDGE, J. & GOLLNICK, P., 18 Nov 1994, In: Journal of Molecular Biology. 244, 1, p. 15 5 p.

CRYSTALLIZATION AND PRELIMINARY-X-RAY INVESTIGATION OF HOLOTRYPTOPHANASES FROM ESCHERICHIA-COLI AND PROTEUS-VULGARIS

DEMENTIEVA, I. S., ZAKOMIRDINA, L. N., SINITZINA, N. I., ANTSON, A. A., WILSON, K. S., ISUPOV, M. N., LEBEDEV, A. A. & HARUTYUNYAN, E. H., 14 Jan 1994, In: Journal of Molecular Biology. 235, 2, p. 783-786 4 p.

3-DIMENSIONAL STRUCTURE OF TYROSINE PHENOL-LYASE

ANTSON, A. A., DEMIDKINA, T. V., GOLLNICK, P., DAUTER, Z., VONTERSCH, R. L., LONG, J., BEREZHNOY, S. N., HARUTYUNYAN, E. H., WILSON, K. S. & PHILLIPS, R. S., 27 Apr 1993, In: Biochemistry. 32, 16, p. 4195-4206 12 p.

Three-dimensional structure of tyrosine phenol-lyase

Antson, A. A., Demidkina, T. V., Gollnick, P., Dauter, Z., von Tersch, R. L., Long, J., Berezhnoy, S. N., Phillips, R. S., Harutyunyan, E. H. & Wilson, K. S., 27 Apr 1993, In: Biochemistry. 32, 16, p. 4195-206 12 p.

THE POLYPEPTIDE CHAIN FOLD IN TYROSINE PHENOL-LYASE, A PYRIDOXAL-5'-PHOSPHATE DEPENDENT ENZYME

ANTSON, A. A., STROKOPYTOV, B. V., MURSHUDOV, G. N., ISUPOV, M. N., HARUTYUNYAN, E. H., DEMIDKINA, T. V., VASSYLYEV, D. G., DAUTER, Z., TERRY, H. & WILSON, K. S., 18 May 1992, In: FEBS Letters. 302, 3, p. 256-260 5 p.

Electron-microscopic study of the structure of tyrosine-phenol-lyase from Citrobacter intermedius

Sherman, M. B., Antson, A. A., Orlova, E. V., Zograf, O. N. & Demidkina, T. V., 1 Dec 1990, In: Doklady Biophysics. 310-312, p. 115-117 3 p.

A crystallographic station for structural investigations of macromolecular crystals on the synchrotron beam of the VEPP-3 storage ring

Popov, A. N., Antson, A. A., Belyaev, V. V., Bondarenko, K. P., Harutyunyan, E. H., Kheiker, D. M., Sheromov, M. A. & Mytnychenko, S. V., 10 Oct 1989, In: Nuclear instruments & methods in physics research section a-Accelerators spectrometers detectors and associated equipment. 282, 2-3, p. 510-515 6 p.

Crystallization and crystal data on tyrosine phenol-lyase

Demidkina, T. V., Myagkikh, I. V., Antson, A. A. & Harutyunyan, E. H., 23 May 1988, In: FEBS Letters. 232, 2, p. 381-2 2 p.

Activities

BBC Look North

Hawkins, D. (Organiser), Ker, D.-S. (Participant), Bayfield, O. (Participant) & Antson, A. A. (Host)
17 Apr 2020

Pasteur Institut, Paris (External organisation)

Antson, A. A. (Advisor)
Apr 2020 → May 2020

SWISS NATIONAL SCIENCE FOUNDATION (SNSF) (External organisation)

Antson, A. A. (Advisor)
Apr 2020 → May 2020

La Caixa Foundation Health Research (External organisation)

Antson, A. A. (Advisor)

1 Mar 2020 → 30 Apr 2020

Structure and mechanism of nucleic acid-processing machines in viral biogenesis

Antson, A. A. (Invited speaker)

29 Jan 2020

PhD examination

Antson, A. A. (Examiner (external))

9 Dec 2019

Andrey Shkoporov

Antson, A. A. (Host)

24 Nov 2019 → 26 Nov 2019

Karin Holmfeldt

Antson, A. A. (Host)

10 Oct 2019 → 12 Oct 2019

Irish Research Council (External organisation)

Antson, A. A. (Advisor)

5 Sept 2019 → 30 Jan 2020

Wah Chiu

Antson, A. A. (Host)

4 Sept 2019 → 6 Sept 2019

Czech Academy of Science (External organisation)

Antson, A. A. (Advisor)

Aug 2019 → Sept 2019

Conformational changes during capsid expansion: cryo-EM analysis of a thermophilic virus

Antson, A. A. (Invited speaker)

29 Jul 2019

Stanford Synchrotron Radiation Lightsource, SLAC National Accelerator Laboratory, Stanford University

Antson, A. A. (Visitor)

19 Jul 2019 → 28 Jul 2019

Session XII: capsid morphogenesis

Antson, A. A. (Chair)

18 Jul 2019

Evgeniy Klimuk

Antson, A. A. (Host)

4 Jul 2019 → 5 Dec 2019

Viral nucleic acid machines

Antson, A. A. (Invited speaker)

17 May 2019

YSBL-SKOLTECH

Antson, A. A. (Organiser)
17 May 2019 → 18 May 2019

ANR (Agence Nationale de la Recherche), France (External organisation)

Antson, A. A. (Advisor)
31 Mar 2019 → 10 May 2019

How do viruses fill their capsids with DNA?

Antson, A. A. (Invited speaker)
20 Mar 2019

La Caixa Foundation Health Research, Spain (External organisation)

Antson, A. A. (Advisor)
1 Mar 2019 → 31 Mar 2019

DNA recognition and capsid expansion during virus assembly

Antson, A. A. (Invited speaker)
25 Feb 2019

NATIONAL INSTITUTES OF HEALTH

Antson, A. A. (Collaborator)
24 Feb 2019 → 26 Feb 2019

Northeastern University

Antson, A. A. (Collaborator)
3 Jan 2019 → 5 Jan 2019

Irish Research Council (External organisation)

Antson, A. A. (Advisor)
1 Nov 2018 → 10 Jan 2019

Stanford University, Stanford, CA, USA.

Antson, A. A. (Collaborator)
12 Oct 2018 → 10 Apr 2019

European Crystallographic Meeting ECM31

Antson, A. A. (Chair)
22 Aug 2018 → 27 Aug 2018

York Festival of Ideas

Antson, A. A. (Organiser)
12 Jun 2018

Evgeniy Klimuk

Antson, A. A. (Host)
1 Jan 2018 → 15 Mar 2019

XXV 2017 Biennial Conference on Phage/Virus Assembly

Antson, A. A. (Chair)
20 Aug 2017 → 25 Aug 2017

Biomotors, Virus Assembly, and Nanobiotechnology Applications

Antson, A. A. (Chair)
18 Aug 2017

Biomotors, Virus Assembly, and Nanobiotechnology Applications

Antson, A. A. (Invited speaker)
16 Aug 2017 → 19 Aug 2017

Evgeniy Klimuk

Antson, A. A. (Host)
1 May 2017 → 31 Jul 2017

How do viruses fill their capsids with DNA?

Antson, A. A. (Invited speaker)
9 Sept 2016 → 12 Sept 2016

80th Harden conference, "Machines on Genes"

Antson, A. A. (Speaker)
3 Aug 2016

Meni Wanunu

Antson, A. A. (Host)
9 Jul 2015 → 11 Jul 2015

UK Structural Biology Forum EM meeting

Antson, A. A. (Participant)
6 Jul 2015

Alisdair Steven

Antson, A. A. (Host)
15 Jun 2015

XXIV Biennial Conference on Phage/Virus Assembly

Antson, A. A. (Speaker)
7 Jun 2015 → 12 Jun 2015

CCP-EM Spring Symposium

Antson, A. A. (Participant)
28 May 2015

WELLCOME TRUST (External organisation)

Antson, A. A. (Member)
2009 → 2017

Awards

Structural virology of viral dark matter: unveiling novel therapeutic bacteriophages from Southeast Asia

ANTSON, F. (Principal investigator)
THE ROYAL SOCIETY: £11,895.00
30/03/26 → 29/03/28

Projects

Action! Modelling DNA nano-machines for deciphering their molecular mechanisms

NOY, A. (Principal investigator) & ANTSON, F. (Co-investigator)
1/10/17 → 31/03/21

An imaging filter to enable high-resolution cryogenic electron tomography (cryoET) at York

BLAZA, J. (Principal investigator), ANTSON, F. (Co-investigator), BARDY, P. (Co-investigator), Correia Faria, J. R. (Co-investigator), DAVIES, G. J. (Co-investigator), Hill, C. (Co-investigator), Mackinder, L. C. M. (Co-investigator), THOMAS, G. H. (Co-investigator) & WALKER, C. E. (Co-investigator)

BBSRC (BIOTECHNOLOGY AND BIOLOGICAL SCIENCES RESEARCH COUNCIL)

1/08/24 → 31/07/25

A regional cryo-EM Facility at the University of York

DAVIES, G. J. (Principal investigator), ANTSON, F. (Co-investigator), BRZOZOWSKI, M. (Co-investigator), COWTAN, K. (Co-investigator), MOTTRAM, J. C. (Co-investigator), PLEVIN, M. J. (Co-investigator) & POTTS, J. R. (Co-investigator)

20/12/18 → 19/12/23

Bilateral NSF/BIO-BBSRC: Engineering Tunable Portal Hybrid Nanopores for High-Resolution Sequence Mapping

ANTSON, F. (Principal investigator) & GREIVE, S. J. M. (Researcher)

BBSRC (BIOTECHNOLOGY AND BIOLOGICAL SCIENCES RESEARCH COUNCIL)

1/10/16 → 30/09/19

C2D2 Research 3a - Small molecule manipulation of microRNA biogenesis: application to microRNAs linked to chronic diseases

PLEVIN, M. J. (Principal investigator), ANTSON, F. (Co-investigator), HUBBARD, R. E. (Co-investigator) & LAGOS, D. (Co-investigator)

1/02/14 → 31/12/14

CFH2a priming - Understanding DNA-processing molecular motors from Human Papillomavirus for designing anti-viral drugs

NOY, A. (Principal investigator) & ANTSON, F. (Co-investigator)

1/06/18 → 30/09/19

Chemistry Dreamport Studentship 2019

ANTSON, F. (Principal investigator) & GREIVE, S. J. M. (Co-investigator)

1/09/19 → 30/09/24

Data Collection facilities for York Structural Biology Laboratory: Structural proteomics for Human Health

ANTSON, F. (Principal investigator)

1/12/06 → 30/11/11

Engineering thermophage particles for studying virus assembly

ANTSON, F. (Principal investigator)

THE ROYAL SOCIETY

1/07/16 → 30/06/19

Function Of Rna-Binding Proteins

Antson, A. A. (Principal investigator)

1/02/03 → 31/01/07

Harnessing the potential of atypical gDNA processing by domesticated viruses

FOGG, P. C. M. (Principal investigator) & ANTSON, F. (Co-investigator)

BBSRC (BIOTECHNOLOGY AND BIOLOGICAL SCIENCES RESEARCH COUNCIL)

1/01/22 → 30/09/25

Integrated multi-user crystallisation facility comprising a robot and storage system with image retrieval

ANTSON, F. (Principal investigator), BRZOZOWSKI, M. (Co-investigator), DAVIES, G. J. (Co-investigator), POTTS, J. R. (Co-investigator), SMITH, D. F. (Co-investigator), WILKINSON, T. (Co-investigator) & WILSON, K. S. (Co-investigator)

1/12/13 → 30/11/18

Mechanism of genome packaging by dsDNA viruses

ANTSON, F. (Principal investigator) & O'TOOLE, P. J. (Co-investigator)
2/08/22 → 1/08/27

Molecular mechanism of genome packaging by dsDNA viruses Antson AA

Antson, A. A. (Principal investigator)
2/08/22 → 1/08/27

Obstacles to replication: uncovering the mechanisms of macromolecular collisions

HAWKINS, M. S. (Principal investigator), ANTSON, F. (Co-investigator) & BLAZA, J. (Co-investigator)
BBSRC (BIOTECHNOLOGY AND BIOLOGICAL SCIENCES RESEARCH COUNCIL)
1/07/23 → 30/04/27

Opening of a double stranded DNA replication fork by a hexameric helicase

ANTSON, F. (Principal investigator)
BBSRC (BIOTECHNOLOGY AND BIOLOGICAL SCIENCES RESEARCH COUNCIL)
1/02/14 → 2/05/17

Senior Research Fellowship-Dr Antson

Antson, A. A. (Principal investigator)
1/08/02 → 31/07/07

Structural basis of high-frequency horizontal gene transfer mediated by bacteriophage-like particles

ANTSON, F. (Principal investigator), BARDY, P. (Co-investigator) & FOGG, P. C. M. (Co-investigator)
1/03/22 → 31/05/26

Structural Biology Laboratory

ANTSON, F. (Principal investigator)
1/01/09 → 26/04/12

Structural investigation..papillomavirus..complex

Antson, A. A. (Principal investigator)
1/01/05 → 31/12/07

Structural virology of viral dark matter: unveiling novel therapeutic bacteriophages from Southeast Asia

ANTSON, F. (Principal investigator)
THE ROYAL SOCIETY
30/03/26 → 29/03/28

Structure and mechanism of nucleic acid-processing machines in viral biogenesis

Antson, A. A. (Principal investigator)
1/08/17 → 31/07/22

Structure and mechanism of viral nucleic acid motors

ANTSON, F. (Principal investigator)
1/08/17 → 31/12/22

Structure & mechanism of multicomponent....

ANTSON, F. (Principal investigator)
1/08/07 → 31/07/12

Unpacking the terminase: Revealing the distinctions between Gene Transfer Agent and viral DNA translocation motors

FOGG, P. C. M. (Principal investigator) & ANTSON, F. (Co-investigator)
BBSRC (BIOTECHNOLOGY AND BIOLOGICAL SCIENCES RESEARCH COUNCIL)
1/01/26 → 31/12/28

Wellcome Trust Senior Research Fellowship

ANTSON, F. (Principal investigator)

1/08/12 → 31/07/17

X-ray Diffraction Equipment for Macromolecular Crystallography at York

DAVIES, G. J. (Principal investigator), ANTSON, F. (Co-investigator), BRZOZOWSKI, M. (Co-investigator), COWTAN, K. (Co-investigator), FASCIONE, M. A. (Co-investigator), GROGAN, G. J. (Co-investigator), PLEVIN, M. J. (Co-investigator), THOMAS, G. H. (Co-investigator), WILKINSON, T. (Co-investigator), WILLEMS, L. I. (Co-investigator) & WILSON, K. S. (Co-investigator)

BBSRC (BIOTECHNOLOGY AND BIOLOGICAL SCIENCES RESEARCH COUNCIL)

18/09/20 → 17/09/22