

STEPHEN COPLAN HARRISON

Date Prepared: March 8, 2016
Office Address: 250 Longwood Avenue
Boston, MA 02115
Home Address: 19R Sparhawk Street
Boston, MA 02135
E-Mail: schadmin@crystal.harvard.edu Fax: 617-432-5600
Place of Birth: New Haven Connecticut

EDUCATION

1963 A.B. (Chemistry and Physics) Harvard College
1967 Ph.D. in Biophysics, Harvard University

Postdoctoral Training:

1967-68 Helen Hay Whitney Postdoctoral Research Fellow, Children's Cancer Research Foundation, Boston, Massachusetts; Research Fellow in Biophysics, Harvard University

Academic Appointments:

1965-68 Resident Tutor and Tutor in Biology, Lowell House, Harvard University
1968-71 Junior Fellow in the Society of Fellows, Harvard University
1969-71 Research Associate in Pathology, Children's Cancer Research Foundation, Boston, Massachusetts
1971-72 Visiting Research Associate in Biophysics, Max-Planck Institute; Visiting Professor, Faculty of Biology, University of Heidelberg
1971-75 Assistant Professor of Biochemistry, Harvard University
1971-96 Chairman, Board of Tutors in Biochemical Sciences Harvard University
1971- Non-resident Tutor, Lowell House, Harvard University
1975-77 Associate Professor of Biochemistry, Harvard University
1977 Visiting Fellow Commoner, Trinity College, Cambridge; Visiting Scientist, MRC Laboratory of Molecular Biology, Cambridge, UK
1977-1998 Professor of Biochemistry and Molecular Biology, Harvard University
1987- Investigator, Howard Hughes Medical Institute at Harvard University
1988-1992 Chairman, Dept. of Biochemistry & Molecular Biology, Harvard University
1996- Professor of Biological Chemistry and Molecular Pharmacology and Professor of Pediatrics, Harvard Medical School, Boston
1996-2002 Director, Center for Structural Biology, Harvard Medical School
1996 - Head, Laboratory of Molecular Medicine, Children's Hospital, Boston
1998-2002 Higgins Professor of Biochemistry, Harvard University
2000-2001 Acting Head Tutor in Biochemical Sciences
2009 – 2012 Acting Chairman, Dept. of Biological Chemistry & Molecular Pharmacology, Harvard Medical School
2002- Director, Center for Molecular and Cellular Dynamics, Harvard Medical School
2007- Giovanni Armenise-Harvard Professor in Basic Biomedical Sciences

Scientific Advisory Boards

1993 - 2001 Trustee, Center for Blood Research, Harvard Medical School
1994 - 2007 Vertex Pharmaceuticals, Inc.
2000 - Helen Hay Whitney Foundation: Vice President and Chair of Scientific Advisory Board

Major Administrative Responsibilities:

Director, HMS Center for Molecular and Cellular Dynamics

Major Committee Assignments:

Committee on Higher Degrees in Biophysics, Harvard University
Virology Committee, Harvard Medical School
BCMP Executive Committee, Harvard Medical School
Chairman, Tools and Technology (TNT) Faculty Committee

Professional Societies

American Association for the Advancement of Science
American Crystallographic Association
American Society for Microbiology
American Society for Virology

Editorial Boards:

1993 - Editorial Board, Structure
2001 - 2005 Editorial Board, Cell

Awards and Honors

1982 Ledlie Prize, Harvard University
1984 Sumner Lecturer, Cornell University
1987 John T. Edsall Lecturer, Harvard University
1988 Wallace P. Rowe Award, NIAID
1988 Shipley Symposium Lecturer, Harvard Medical School
1989 Fellow, American Academy of Arts and Sciences
1990 Harvey Lecturer, The Harvey Society, New York
1990 Louisa Gross Horwitz Prize, Columbia University
1991 E.J. Cohn Lecture, Harvard Medical School
1991 Member, National Academy of Sciences
1992 Stein Memorial Lecture, Rockefeller University, New York
1995 Searle Distinguished Lectureship, Northwestern University
1997 Member, American Philosophical Society
1998 ICN International Prize in Virology
2000 Klaus Hoffman Lectureship, University of Pittsburgh
2001 Associate Member, European Molecular Biology Organization
2001 Paul Ehrlich and Ludwig Darmstaedter Prize
2005 Bristol Myers Squibb Distinguished Achievement Award in Infectious Disease Research
2005 Fellow, American Association for the Advancement of Science
2006 Royal Swedish Academy of Sciences, Gregori Aminoff Prize in Crystallography
2007 UCSD/Merck Life Sciences Achievement Award
2007 Hans Neurath Lecturer, University of Washington, Seattle
2011 Harland Wood Memorial Lecture, Case Western Reserve University
2011 William Silen Lifetime Achievement in Mentoring Award
2012 Pauling Lectureship, Stanford University
2014 Foreign Member, The Royal Society
2014 Bruce Merrifield Memorial Lecture, Rockefeller University, New York
2015 Cynthia A. Chan Memorial Lecturer, University of California, Berkeley
2015 Widom Lecturer, Northwestern University
2015 The Welch Award in Chemistry
2015 Honorary Doctorate in Medicine, University of Milan

Stephen C. Harrison
Publications

- S. C. Harrison and E. R. Blout. "Reversible Conformational Changes of Myoglobin and Apomyoglobin." *J. Biol. Chem.* 240, 299 (1965).
- J. M. Diamond and S. C. Harrison. "The Effect of Membrane Fixed Charges on Diffusion Potentials and Streaming Potentials." *J. Physiol.* 183, 37 (1966).
- S. C. Harrison. "The Structure of Tomato Bushy Stunt Virus." Ph.D. Thesis, Harvard University, 1967.
- S. C. Harrison. "A Point Focusing Camera for Single-Crystal Diffraction." *J. Appl. Cryst.* 1, 84 -90. (1968).
- S. C. Harrison. "Structure of Tomato Bushy Stunt Virus. I. The Spherically Averaged Electron Density." *J. Mol. Biol.* 42 457 (1969).
- K. Weber, J. Rosenbusch, and S. C. Harrison. "Structure of Tomato Bushy Stunt Virus." *Virology* 41, 763 (1970).
- S. C. Harrison, D. L. D. Caspar, D. Camerini-Otero, and R. M. Franklin. "Lipid and Protein Arrangement in Bacteriophage PM2." *Nature New Biol.*; 229,197 (1971).
- S. C. Harrison, A. David, J. Jumblatt, and J. E. Darnell. "Lipid and Protein Organization in Sindbis Virus." *J. Mol. Biol.* 60, 523-528 (1971).
- S. C. Harrison. "Structure of Tomato Bushy Stunt Virus at 25 Å Resolution." *Cold Spr. Harb. Symp. Quant. Biol.* XXXVI, 495 (1971).
- R. M. Franklin, S. C. Harrison, U. Petterson, L. Philipson, C. Braden, and P. E. Werner. "Structural Studies on the Adenovirus Hexon." *Cold Spr. Harb. Symp. Quant. Biol.* XXXVI, 503 (1971).
- Y. DuPont, S. C. Harrison, and W. Hasselbach. "Molecular Organization in the Sarcoplasmic Reticulum Membrane Studied by X-ray Diffraction." *Nature* 244, 555 (1973).
- S. C. Harrison. "Biological Diffraction" in Research Application of Synchrotron Radiation. Brookhaven National Laboratory, BNL-50381(1973).
- A. Ziegler, S. C. Harrison, and R. Leberman. "Minor Proteins in Tomato Bushy Stunt and Turnip Crinkle Viruses." *Virology* 59, 509 (1974).
- S. C. Harrison, A. Jack, D. Goodenough, and B. Sefton. "Structural Studies of Spherical Viruses." *J. Supramolec. Structure* 2, 486 (1974).
- C. H. von Bonsdorff and S. C. Harrison. "Sindbis Virus Glycoproteins Form a Regular Icosahedral Surface Lattice." *J. Virol.* 16, 141 (1975).
- C. Cohen, S. C. Harrison, and R. E. Stephens. "X-ray Diffraction from Microtubules." *J. Mol. Biol.* 59, 375 (1975).
- C. Cohen, D. DeRosier, S. C. Harrison, R. E. Stephens, and J. Thomas. "X-ray Patterns from Microtubules." *Ann. New York Acad. Sci.* 254, 53 (1975).
- A. Jack, S. C. Harrison, and R. A. Crowther. "Structure of Tomato Bushy Stunt Virus, II. Comparison of Results Obtained by Electron Microscopy and X-ray Diffraction." *J. Mol. Biol.* 97, 163 (1975).
- S. C. Harrison and A. Jack. "Structure of Tomato Bushy Stunt Virus, III. Three-Dimensional X-ray Diffraction Analysis at 16 Å Resolution." *J. Mol. Biol.* 97, 173 (1975).
- A. Jack and S. C. Harrison. "On the Interpretation of Small-Angle X-ray Solution Scattering from Spherical Viruses." *J. Mol. Biol.* 99,15 (1975).

- D. H. Ohlendorf, M. L. Collins, E. O. Puronen, L. J. Banaszak, and S. C. Harrison. "Crystalline Lipoprotein-Phosphoprotein Complex in Oocytes from *Xenopus laevis*: Determination of Lattice Parameters by X-ray Crystallography and Electron Microscopy." *J. Mol. Biol.* 99,153 (1975).
- W. Earnshaw, S. Casjens, and S. C. Harrison. "X-ray Diffraction from P22 Heads." *J. Mol. Biol.* 104, 387 (1976).
- S. C. Harrison and R. D. Kornberg. "X-ray Diffraction from Isolated Repeat Units of Chromatin," in Molecular Mechanisms in the Control of Gene Expression (Academic Press, (1976).
- F. K. Winkler, C. E. Schutt, S. C. Harrison, and G. Bricogne. "Tomato Bushy Stunt Virus at 5.5 Å Resolution." *Nature* 265, 509 (1977).
- McCarthy, M. and Harrison, S.C. "Glycosidase Susceptibility: a Probe for the Distribution of Glycoprotein Oligosaccharides in Sindbis Virus." *J. Virol.* 23. 61-73 (1977).
- W. C. Earnshaw and S. C. Harrison. "DNA arrangement in Isometric Phage Heads." *Nature* 268, 598 (1977).
- G. Bricogne, S. C. Harrison, F. K. Winkler, and others. Report of CECAM Workshop on Virus Crystallography (1977).
- S. C. Harrison. "Structure of Simple Viruses: Specificity and Flexibility in Protein Assemblies." *TIBS* 3, 3 (1978).
- W. C. Earnshaw, J. King, S. C. Harrison, and F. A. Eiserling. "The Structural Organization of DNA Packaged within the Heads of T4 Wild-Type, Isometric and Giant Bacteriophages." *Cell* 14, 559 (1978).
- S. C. Harrison, A. J. Olson, C. E. Schutt, F. K. Winkler, and G. Bricogne. "Tomato Bushy Stunt Virus at 2.9 Å Resolution." *Nature* 276, 368 (1978).
- C. H. von Bonsdorff and S. C. Harrison. "Hexagonal Glycoprotein Arrays from Sindbis Virus Membranes" *J. Virol.* 28, 578 -583. (1978).
- F. K. Winkler, C. E. Schutt, and S. C. Harrison. "The Oscillation Method for Crystals with Very Large Unit Cells." *Acta Cryst.* A35, 901 (1979).
- S.C. Harrison. "Virus Crystallography Comes of Age." *Nature* 286, 558-559, News and Views (1980).
- S. C. Harrison. "Protein Interfaces and Intersubunit Bonding: The Case of Tomato Bushy Stunt Virus." *Biophys. J.* 32,139-153. (1980).
- M. G. Munowitz, C. M. Dobson, R. G. Griffin, and S. C. Harrison. "On the Rigidity of RNA in Tomato Bushy Stunt Virus." *J. Mol Biol.* 141, 327 (1980).
- S. C. Harrison. "Molecular Packing of Nucleic Acids in Spherical Viruses." in Biological Recognition and Assembly (eds. D. S. Eisenberg, J. A. Lake and C. F. Fox) Alan R. Liss, New York, (1980); p. 301.
- S. C. Harrison. "Molecular Organization of Virus Particles: Implications for Assembly." *Prog. Clin. Biol. Res.* 64, 3 (1981).
- S.C. Harrison, A.J. Olson, J.S. Golden, J.M. Hogle, R.C. Ladner, I.K. Robinson, R.T Sauer "Recognition and Specificity in Assembly of Icosahedral Viruses: TBSV and TCV." *Structural Aspects of Recognition and Assembly in Biological Macromolecules*. Balaban ISS, Rehovot and Philadelphia (1981).
- T. Kirchhausen and S. C. Harrison. "Protein Organization in Clathrin Trimers." *Cell* 23, 755 (1981).
- J. S. Golden and S. C. Harrison. "Proteolytic Dissection of Turnip Crinkle Virus Subunit in Solution." *Biochem.* 16, 3862 (1982).

- I. K. Robinson and S. C. Harrison. "Structure of the Expanded State of Tomato Bushy Stunt Virus." *Nature* 297, 563 (1982).
- T. Kirchhausen, S. C. Harrison, P. Parham, and F. M. Brodsky. "Location and Distribution of the Light Chains in Clathrin Trimers." *Proc. Nat. Acad. Sci. USA* 80, 2481-85 (1983).
- S. C. Harrison and T. Kirchhausen. "Clathrin, Cages, and Coated Vesicles." *Cell* 33, 650-652 (1983).
- S. C. Harrison. "Virus Structure: High Resolution Perspectives" in *Advances in Virus Research*. Vol. 28 (eds. M. Lauffer and K. Mamamorsch) Academic Press, Inc., New York, 1983; pp. 175-240 (1983).
- A. J. Olson, G. Bricogne, and S. C. Harrison. "Structure of Tomato Bushy Stunt Virus, IV: The Virus Particle at 2.9 Å Resolution." *J. Mol. Biol.* 171, 61-93 (1983).
- J. Hogle, T. Kirchhausen, and S. C. Harrison. "Divalent Cation Sites in Tomato Bushy Stunt Virus: Difference Maps at 2.9 Å Resolution." *J. Mol. Biol.*, 171, 95-100 (1983).
- S. C. Harrison. "Packaging of DNA into Bacteriophage Heads - A Model." *J. Mol. Biol.* 171, 577-580 (1983).
- J. Anderson, M. Ptashne, and S. C. Harrison. "Co-crystals of the DNA-binding Domain of Phage 434 Repressor and a Synthetic Phage 434 Operator." *Proc. Nat'l. Acad. Sci. USA* 81, 1307-1311 (1984).
- S. C. Harrison. "Structures of Viruses" in *The Microbe 1984: Part 1 Viruses* (ed. B. W. J. Mahy and J. R. Pattison), Soc. Gen. Microbiol. Symposium 36, pp. 29-73 (1984).
- P. Hopper, S. C. Harrison, and R. Sauer. "Structure of Tomato Bushy Stunt Virus V: Protein Sequence Determination and its Structural Implications." *J. Mol. Biol.* 177, 701-713 (1984).
- S. C. Harrison. "Multiple Modes of Subunit Association in the Structures of Simple Spherical Viruses." *TIBS* Vol. 9, No. 1, pp. 345-351 (1984).
- T. Kirchhausen, J. Wang, and S. C. Harrison. "Structural Studies of DNA Gyrase." *Proceedings of the 42nd Annual Meeting of the Electron Microscopy Society of America* (1984)
- T. Kirchhausen and S. C. Harrison. "Structural Domains of Clathrin Heavy Chains." *J. Cell. Biol.* 99: 1725-34 (1984).
- S. C. Harrison. "Principles of Virus Structure" in *Virology* (ed. B. N. Fields et al.; Raven Press, New York), 27-44 (1985).
- S.C. Harrison. "First comparison of two animal viruses in three dimensions." *Nature* 317, 382-384, News and Views (1985).
- S.C. Harrison. "Protein Structures. Two for the price of one." *Nature* 313, 736-737, News and Views (1985).
- S. C. Harrison and R. Durbin. "Is There a Single Pathway for the Folding of a Polypeptide Chain?" *Proc. Natl. Acad. Sci. USA* 82, 4028-4030 (1985).
- T. Kirchhausen, J.C. Wang, and S.C. Harrison. "DNA Gyrase and its Complexes with DNA: Direct Observation by Electron Microscopy." *Cell* 41, 933-943 (1985).
- S. C. Harrison, F. K. Winkler, C. E. Schutt, and R. M. Durbin. "Oscillation Method with Large Unit Cells," in *Methods in Enzymology*. Vol. 114, Part A (eds. Colowick and Kaplan, Academic Press, Inc., Orlando, FLA, (1985).
- J. Anderson, M. Ptashne, and S. C. Harrison. "A Phage Repressor-Operator Complex at 7 Å Resolution." *Nature* 316, 596-601 (1985).

- F.D. Bushman, J. Anderson, S.C. Harrison, and M. Ptashne. "Ethylation Interference and X-ray Crystallography Identify Similar Interactions Between 434 Repressor and Operator." *Nature* 316, 651-653 (1985).
- S.C. Harrison and T. Kirchhausen. "Molecular Interactions in Receptor Cycling and Endocytosis by Clathrin-Coated Vesicles." *TIBS Centerfold*, October (1985).
- R. Durbin, R. Burns, J. Moulai, P. Metcalf, D. Freymann, J. Anderson, S. C. Harrison, and D. C. Wiley. "Protein, DNA, and Virus Crystallography with a Focused Imaging Proportional Counter." *Science* 232, 1127-1132 (1986).
- S. C. Harrison. "Alphavirus Structure," Chapter 2 of *The Togaviridae and Flaviviridae* (S. and M. Schlesinger, eds., Plenum Publishing Corp., 1986).
- J. M. Hogle, A. Maeda, and S. C. Harrison. "Structure and Assembly of Turnip Crinkle Virus, I: X-ray Crystallographic Structure Analysis at 3.2 Å Resolution." *J. Mol. Biol.* 191, 625-638 (1986).
- P. K. Sorger, P. G. Stockley, and S. C. Harrison. "Structure and Assembly of Turnip Crinkle Virus, II: Mechanism of *in vitro* Reassembly." *J. Mol. Biol.* 191, 639-658 (1986).
- P. G. Stockley, A. L. Kirsh, E. P. Chow, J. E. Smart, and S. C. Harrison. "Structure of Turnip Crinkle Virus, III: Identification of a Unique Coat Protein Dimer." *J. Mol. Biol.* 191, 721-725 (1986).
- T. Kirchhausen, S.C. Harrison, and J. Heuser. "Configuration of Clathrin Trimers: Evidence from Electron Microscopy." *J. of Ultrastructure and Mol. Structure Research* 94, 199-208 (1986).
- J. Carrington, T. J. Morris, P. G. Stockley, and S. C. Harrison. "Structure and Assembly of Turnip Crinkle Virus, IV: Analysis of the Coat Protein Gene and Implications of the Subunit Primary Structure." *J. Mol. Biol.* 194, 265-276 (1987).
- S. C. Harrison, P. K. Sorger, P.G. Stockley, J. Hogle, R. Altman, and R.K. Strong. "Mechanism of RNA Virus Assembly and Disassembly." in *Positive Strand RNA Viruses*, Alan R. Liss, Inc., 379-395 (1987).
- J. E. Anderson, M. Ptashne, and S. C. Harrison. "Structure of the Bacteriophage 434 Repressor-Operator Complex." *Nature* 326, 846-852 (1987).
- G. B. Koudelka, S. C. Harrison, and M. Ptashne. "Non-contacted Bases Affect the Operator Affinities of 434 Repressor and Cro." *Nature* 326, 886-888 (1987).
- C. Wolberger and S. C. Harrison. "Crystallization and X-ray Diffraction Studies of a 434 Cro-DNA Complex." *J. Mol. Biol.* 196, 951-954 (1987).
- M. Blum, P. Metcalf, S. C. Harrison, and D. C. Wiley. "A System for Collection and On-line Integration of X-ray Diffraction Data from a Multiwire Area Detector." *J. Appl. Cryst.* 20, 235-242 (1987).
- T. Kirchhausen, P. Scarmato, S.C. Harrison, J.J. Monroe, E.P. Chow, R.J. Mattaliano, K.L. Ramachandran, J.E. Smart and J. Brosius. "Clathrin Light Chains LCA and LCB are Similar, Polymorphic, and Share Repeated Heptad Motifs." *Science* 236, 320-324 (1987).
- S.C. Harrison, J.E. Anderson, G.B. Koudelka, A. Mondragon, S. Subbiah, R.P. Wharton, C. Wolberger and M. Ptashne. "Recognition of DNA Sequences by the Repressor of Bacteriophage 434". *Biophysical Chemistry* 29, 31-37 (1988).
- S.C. Harrison, J.E. Anderson, Y-C. Dong, M. Drottar, G.B. Koudelka, A. Mondragon, S. Subbiah, R.P. Wharton, C. Wolberger and M. Ptashne. "Recognition of DNA Sequences by the Repressor and Cro Proteins of Bacteriophage 434." *Proceedings of the Symposium Louis Pasteur, 1987. Bulletin Institute Pasteur* 86, 55-64 (1988).

- A.P. Turkewitz, J.F. Amatruda, D. Borhani, S.C. Harrison, and A.L. Schwartz. "A High Yield Purification of the Human Transferrin Receptor and Properties of Its Major Extracellular Fragment." *J. Biol. Chem.* **263**, No. 17, pp. 8318-8325. (1988). G.B. Koudelka, P. Harbury, S.C. Harrison, M. Ptashne. "DNA Twisting and the Affinity of Bacteriophage 434 Operator for Bacteriophage 434 Repressor." *PNAS.USA* **85**: 4633-4637 (1988).
- C. Wolberger, Y. Dong, M. Ptashne and S.C. Harrison. "Structure of a Phage 434 Cro/DNA Complex." *Nature* **335**, 789-795 (1988).
- A. Aggarwal, D. Rodgers, M. Drottar, M. Ptashne, and S.C. Harrison. "Recognition of a DNA Operator by the Repressor of Phage 434: a View at High Resolution." *Science* **242**, 899-907 (1988).
- A.P. Turkewitz, A.L. Schwartz and S.C. Harrison. "A pH-Dependent Reversible Conformational Transition of the Human Transferrin Receptor Leads to Self-Association." *J. Biol. Chem.*, **263**, 16309-16315 (1988).
- A. Mondragon, C. Wolberger and S.C. Harrison. "Structure of Phage 434 Cro Protein at 2.35 Å Resolution." *J. Mol. Biol.*, **205**, 179-188 (1989).
- S.C. Harrison. "Finding the Receptors." *Nature* **338**, 205-206 (1989).
- A. Mondragon, S. Subbiah, S.C. Almo, M. Drottar and S. C. Harrison. "Structure of the Amino Terminal Domain of Phage 434 Repressor at 2.0 Å Resolution." *J. Mol. Biol.*, **205** 189-200 (1989).
- A.P. Turkewitz and S.C. Harrison "Concentration of Transferrin Receptor in Human Placental Coated Vesicles." *J. Cell. Biol.*, **108**: 2127-2135 (1989).
- S. Subbiah and S.C. Harrison."A simulated annealing approach to the search problem of protein crystallography." *Acta Cryst.* **A45**, 337-342 (1989).
- S. Subbiah and S.C. Harrison."A Method for Multiple Sequence Alignment with Gaps" *J. Mol. Biol.* **209**, 539-548 (1989).
- S.C. Harrison. "Common Features in the Design of Small RNA Viruses." in *Concepts in Viral Pathogenesis III* pp. 3-19 (Springer-Verlag New York, Inc.,(1989).
- S.C. Harrison. "Principles of Virus Structure" in *Fundamental Virology*, 2nd Ed. pp. 37-61. (Raven Press, NY; Fields and Knipe, ed. (1990).
- C.O. Pabo, A.K. Aggarwal, S.R. Jordan, L.J. Beamer, U.R. Obeysekare, S.C. Harrison "Conserved Residues Make Similar Contacts in Two Repressor-Operator Complexes." *Science* **247**: 1210-1213 (1990).
- S.C. Harrison and A.K. Aggarwal. "DNA Recognition by Proteins with the helix-turn-helix motif." in *Annual Rev. of Biochem.*, **59**: 933-69 (1990).
- N. Wei, L. A. Heaton, T.J. Morris and S.C. Harrison "Structure and Assembly of Turnip Crinkle Virus V. Identification of Coat Protein Binding Sites on RNA" *J. Mol. Biol.* **214**, 85-95 (1990).
- R.K. Strong and S.C. Harrison. "Proteolytic Dissection of Sindbis Virus Core Protein" *J. Virology* **64**, 3992-3994. (1990)
- J.W. Campbell, I.J. Clifton, T.J. Greenhough, J. Hajdu, S.C. Harrison, R.C. Liddington, A.K. Shrive. "Calcium Binding Sites in Tomato Bushy Stunt Virus Visualized by Laue Crystallography" *J. Mol. Biol.* **214**, 627-632.(1990).
- Coombs, K.M., Fields, B.N. and Harrison, S.C. "Crystallization of the reovirus type 3 Dearing core: Crystal packing is determined by the 1 protein." *J. Mol. Biol.* **215**, 1-5 (1990).
- Weiss, M.A., Ellenberger, T., Wobbe, C.R., Lee, J.P., Harrison, S.C., Struhl, K. "Folding transition in the DNA-binding domain of GCN4 on specific binding to DNA" *Nature* **347**, 575-578 (1990).

- Harrison, S.C. "Common features in the structures of some icosahedral viruses: a partly historical overview" in *Seminars in Virology*, **1**, W.B. Saunders Company pp 387-403 (1990).
- Wang, J., Garrett, T., Yan, Y., Liu, J., Rodgers, D., Garlick, R.L., Tarr, G.E., Husain, Y., Reinherz, E.L., Harrison, S.C. "Atomic structure of a fragment of human CD4 containing two immunoglobulin-like domains" *Nature* **348**: 411-418 (1990).
- Mondragón, A. and Harrison, S.C. "The Phage 434 Cro/OR1 Complex at 2.5 Å Resolution" *J. Mol. Biol.* **219**, 321-334 (1991).
- Borhani, D. and Harrison, S.C. "Crystallization and X-ray Diffraction Studies of a Soluble Form of Human Transferrin Receptor" *J. Mol. Biol.* **218**, 685-689 (1991).
- Harrison, S.C. "What Do Viruses Look Like?" *The Harvey Lectures, Series 85*, 127-152. Wiley-Liss, Inc (1991).
- Heinz, F.X., Mandl, C.W., Holzmann, H., Kunz, C., Harris, B.A., Rey, F., Harrison, S.C. "The Flavivirus Envelope Protein E: Isolation of a Soluble Dimeric Form from Tick-Borne Encephalitis Virus and Its Crystallization" *J. Virol.* **65**: 5579-5583 (1991).
- Harrison, S.C. "Viruses" in *Current Opinion in Structural Biology* Vol. 1/2 **1**: 288-295 (1991).
- Harrison, S.C. "A structural taxonomy of DNA-binding domains" *Nature* **353**: 715-719 (1991).
- Liddington, R.C., Yan, Y., Moulai, J., Sahli, R., Benjamin, T.L., Harrison, S.C. "Structure of Simian Virus 40 at 3.8 Å resolution" *Nature* **354**: 278-284 (1991).
- Baleja, J.D., Marmorstein, R., Harrison, S.C., Wagner, G. "Solution Structure of the DNA-binding Domain of Cd2-GAL4 from *Saccharomyces cerevisiae*" *Nature* **356**: 450-453 (1992).
- Marmorstein, R., Carey, M., Ptashne, M., Harrison, S.C. "DNA Recognition by GAL4: structure of a protein/DNA complex" *Nature* **356**: 408-414 (1992).
- Harrison, S.C., Strong, R.K., Schlesinger, S., Schlesinger, M.J. "Crystallization of Sindbis Virus and its Nucleocapsid" *J. Mol. Biol.* **226**: 277-280 (1992).
- Harrison, S.C. "Viruses" *Current Opinion in Structural Biology* **2**: 293-299. (1992)
- Moebius, U., Clayton, L., Abraham, S., Harrison S.C., Reinherz, E.L. "The HIV gp120 binding site on CD4: Delineation by quantitative equilibrium and kinetic binding studies of mutants in conjunction with a high resolution CD4 atomic structure" *J. Exp. Med.* **176**: 507-517 (1992).
- Moebius, U., Clayton, L.K., Abraham, S., Diener, A., Yunis, J.J., Harrison, S.C. & Reinherz, E.L. "The HIV-gp120 Binding C' C" Ridge of CD4 Domain 1 is Also Involved in Interaction with Class II MHC Molecules" *PNAS* **89**: 12008-12012. (1992).
- Harrison, S.C. "Molecular characteristics of the regulatory switch in phages 434 and lambda" in *Transcriptional Regulation* (ed. by K. Yamamoto & S. McKnight) Ch. 17, 449-473 (Cold Spring Harbor Laboratory Press, New York 1992).
- Harrison, S.C., Wang, J., Yan, Y., Garrett, T., Liu, J., Moebius, U., Reinherz, E.L. "Structure and Interactions of CD4" *Cold Spring Harbor Laboratory Symposia on Quantitative Biology* **57** ; 541-548 (1992).
- Harrison, S.C., Wang, J., Yan, Y., Garrett, T., Liu, J., Moebius, U., Reinherz, E.L. "Structure and Interactions of CD4" *Proceedings of Novo Nordisk Foundation Symposium No. 6 Leukocyte Adhesion' Basic and Clinical Aspects* (Elsevier Publishers, Holland, C.G. Gahmberg, T. Mandrup-Poulsen, L. Wogensen Bach, B. Hökfelt, eds.(1992) pp. 255-269.

- Ellenberger, T.E., Brandl, C.J., Struhl, K., Harrison, S.C. "The GCN4 Basic-Region-Leucine Zipper Binds DNA as a Dimer of Uninterrupted α -helices: Crystal Structure of the Protein-DNA Complex" *Cell* **71**: 1223-1237 (1992).
- Shimon, L.J.W. & Harrison, S.C. "The Phage 434 OR2/R1-69 Complex at 2.5 Å Resolution" *J. Mol. Biol.*, **232**: 826-838 (1993).
- Garrett, T.P.J., Wang, J., Yan, Y., Liu, J., Harrison, S.C. "Refinement and analysis of the structure of the first two domains of human CD4" *J.Mol. Biol* **234**: 763-778 (1993).
- Eck, M.J. Shoelson, S.E., Harrison, S.C. "Recognition of a high affinity phosphotyrosyl peptide by the Src homology domain of p56lck" *Nature*, **362**: 87-91 (1993).
- Liddington R.C. and Harrison, S.C. "Structure of simian virus 40." *Structure* **0**: xxii-xxiii (1993).
- Moebius, U., Pallai, P., Harrison, S.C. Reinherz, E.L. "Delineation of an extended surface contact area on human CD4 involved in class II MHC binding" *PNAS*, **90**: 8259-8263 (1993).
- Harrison, S.C. " CD4: Structure and Interactions of an Ig-superfamily Adhesion Molecule " *Accounts in Chemical Research*, **2**: 449-453(1993) .
- Yan, Y., Winograd, E., Viel, A., Cronin, T., Harrison, S.C. and Branton, D. "Atomic Structure of the Repetitive Segments of Spectrin" *Science*, **262** ; 2027-2030 (1993).
- Rodgers, D.W. & Harrison, S.C. "The complex between phage 434 repressor DNA binding domain and operator site Or₃: structural differences between consensus and non-consensus half-sites." *Structure*, **1** ; 227-240 (1993).
- S.C. Harrison "Common cold virus and its receptor." *Proc. Natl. Acad. Sci USA* Vol 90, p. 783, February (1993).
- Barouch, D.H. & Harrison, S.C. "The Interaction Between the Major and Minor Coat Proteins of Polyomavirus" *J. Virol.*, **68**: 3982-3989 (1994).
- Harrison, S.C. "CD4 - the receptor for HIV." in *Cellular Receptors for Animal Viruses* (editor, E. Wimmer), Chapter 3. (Cold Spring Harbor Laboratory Press, New York, (1994).
- Eck, M.J., Atwell, S.K., Shoelson, S.E. & Harrison, S.C. "Structure of the regulatory domains of the Src-family tyrosine kinase p56lck." *Nature*, **368**: 764-769 (1994).
- Ellenberger, T., Fass, D., Arnaud, M. & Harrison, S.C. "Crystal Structure of Transcription Factor E47: E-box Recognition by a Basic Region Helix-loop-helix Dimer" *Genes & Development*, **8**: 970-980. (1994).
- Stehle, T., Yan, Y., Benjamin, T.L. & Harrison, S.C. "Structure of murine polyomavirus complexed with an oligosaccharide receptor fragment." *Nature*, **369**: 160-163 (1994).
- Marmorstein, R. & Harrison, S.C. "Crystal Structure of a PPR1-DNA Complex: DNA Recognition by Proteins Containing a Zn₂Cys₆ Binuclear Cluster." *Genes & Development*, **8**: 2504-2512. (1994)
- Rodgers, D.W. "Cryocrystallography." *Structure*, **2**: 1135-1140 (1994).
- Glover, J.N.M., & Harrison, S.C. "The Crystal Structure of the Heterodimeric bZIP Transcription Factor c-Fos:c-Jun Bound to DNA." *Nature*, **373**: 257-261. (1995).
- Rodgers, D.W., Gamblin, S.G. Harris, B.A., Ray, S., Culp, J.S., Hellmig, B., Woolf, D.J., Debouck, C. & Harrison, S.C. "The structure of unliganded reverse transcriptase from the human immunodeficiency virus type 1." *PNAS*, **92**: 1222-1226 (1995).
- Müller, C.W., Rey, F.A., Sodeoka, M., Verdine, G.L., & Harrison, S.C. "Structure of the NF- κ B p50 homodimer bound to DNA. *Nature*, **373**: 311-317 (1995).
- Harrison, S.C. "Virus structures and conformational rearrangements" *Current Opinion in Structural Biology* **5** ; 157-164 (1995).

- Rey, F.A., Heinz, F. X., Mandl, C., Kunz, C. & Harrison, Stephen C. "The envelope glycoprotein from tick-borne encephalitis virus at 2 Å resolution." *Nature*, **375** ; 291-298(1995).
- Müller, C.W. & Harrison, S.C. "The structure of the NF-κB p50:DNA complex: A starting point for analyzing the Rel family." *FEBS*, **369** ; 113-117 (1995).
- Bauer, P.H., Bronson, R.T., Fung, S.C., Freund, R., Stehle, T., Harrison, S.C. & Benjamin, T.L. "Genetic and Structural Analysis of a Virulence Determinant in Polyoma VP1" *J. Virol.***69** ; 7925-7931 (1995).
- Harrison, S.C., Skehel, J.J. & Wiley, D.C. "Virus Structure" in *Fields Virology*, Third Edition, 59-99. (B.N. Fields, D.M. Knipe, P.M.Howley, et al. Lippincott-Raven Publishers, Philadelphia, (1996).
- Müller, C.W., Rey, F.A. & Harrison "Comparison of two different DNA-binding modes of the NF-κB p50 homodimer." *Nature Structural Biology* **3** ; 224-227 (1996).
- Berger, J., Gamblin, S.J., Harrison, S.C., & Wang, J.C. "Structure at 2.7 Å resolution of a 92K yeast DNA topoisomerase II fragment." *Nature*, **379** ; 225-232. (1996).
- Yan, Y., Stehle, T., Liddington, R.C., Zhao, H. & Harrison, S.C. "Structure Determination of Simian Virus 40 and Murine Polyomavirus By a Combination of 30-fold and 5-fold Electron-density Avaraging." *Structure* **4** ; 157-164 (1996).
- Stehle, T., Gamblin, S.J., Yan, Y. & Harrison, S.C. "The Structure of Simian Virus 40 Refined at 3.1 Å Resolution." *Structure* **4** ; 165-182 (1996).
- Stehle, T., & Harrison, S.C. "Crystal Structures of Murine Polyomavirus in Complex with Straight-chain and Branched-chain Sialyloligosaccharide Receptor Fragments." *Structure* **4** ; 183-194 (1996).
- Roca, J., Berger, J.M., Harrison, S.C. & Wang, J.C. "DNA Transport by Type II DNA Topoisomerase: Direct Evidence for a Two-Gate Mechanism." *PNAS*, **93** ; 4057-4062. (1996).
- Eck, M.J., Pluskey, S., Trüb, T., Harrison, S.C., & Shoelson, S.E. "Spatial Constraints on the Recognition of Phosphoproteins by the tandem SH2 Domains of the Phosphatase SH-PTP2" *Nature* **379** ; 277-280 (1996).
- Nolte, R.T., Eck, M.J., Schlessinger, J., Shoelson, S.E. & Harrison, S.C. "Crystal Structure of the PI 3 -Kinase P85 Amino-Terminal SH2 Domain and its Phosphopeptide Complexes" *Nature Structural Biology*, **3**: 364-374 (1996).
- Weissenhorn, W., Eck, M.J., Harrison, S.C., & Wiley, D.C. "Phosphorylated T cell receptor zeta-chain and ZAP70 tandem SH2 domains form a 1:3 complex in vitro" *Euro. J. Biochem.* **238**: 440-445 (1996).
- Fass, D., Harrison, S.C. & Kim, P.S. "Retrovirus envelope domain at 1.7 Å resolution" *Nature Structural Biology* **3**: 465-469 (1996).
- Glover, J.N.M., Chen, L., Verdine, G.L., & Harrison, S.C. "A Structural Analysis of the bZIP Family of Transcription Factors: Dimerization, DNA Binding and Interactions with Other Transcription Factors" in *Biol. Struct. and Dynamics. Proceedings of the Ninth Conversation, SUNY Albany, NY 1995* (Eds. Ramaswamy H. Sarma and Mukti H. Sarma, Adenine Press (1996).
- Harrison, S.C. "Peptide-Surface Association: The Case of PDZ and PTB Domains" *Cell* **86**: 341-343 (1996).
- Musacchio, A., Cantley, L.C. & Harrison, S. C. "Crystal Structure of the breakpoint cluster region-homology domain from phosphoinositide 3-kinase p85 a subunit ." *PNAS* **93**: 14373-78 (1996).
- Xu, W., Harrison, S.C. & Eck, M.J. "Three-dimensional structure of human c-Src" *Nature* **385**"595-602 (1997).
- Casasnovas, J.M., Springer, T.A., Liu, J.H., Harrison, S.C. & Wang, J.H. "The Crystal Structure of ICAM-2 Reveals a Distinctive Integrin Recognition Surface" *Nature* **387**: 312-315(1997).
- Stehle, T. & Harrison, S.C. "High-resolution structure of a polyomavirus VP1-oligosaccharide complex: implications for assembly and receptor binding" *EMBO J.* **16**: 5139-5148, (1997).
- Weissenhorn, W., Dessen, A., Harrison, S.C., Skehel, J.J., Wiley, D.C. "Atomic Structure of an Ectodomain from HIV-1 gp 41" *Nature* **387**: 426 - 430. (1997).

- Ferrer, M., Godbout, K.L., Sullivan, B.J., Austen, D.A., Sanderson, C.T., Kelley, K.C., Osburne, M.S., Harrison, S.C., van Schravendijk, M.R. "Construction and characterization of a radio-iodinatable mutant of recombinant human CD4" *J. Immunol. Methods* **210**: 215-225 (1997).
- Berger, J.M., Fass, D., Wang, J.C., Harrison, S.C. (1998). "Structural similarities between topoisomerases that cleave on or both DNA strands." *PNAS* **95**: 7876-7881 (1998).
- Chen, L., Glover, J.N.M. Patrick G. Hogan, P.G., Rao, A., Harrison, S.C. "Structure of the DNA Binding Domains from NFAT, Fos and Jun Bound Specifically to DNA" *Nature*, **392**: 42-48 (1998).
- Chen, X., Stehle, T. and Harrison, S.C. "Crystal structure of a C-terminal fragment of polyomavirus internal protein VP2 and its interaction with VP1" *EMBO J.* **17**: 3233- 3240 (1998).
- Nolte, R.T., Conlin, R.M., Harrison, S.C., Brown, R.S. "Differing roles for zinc fingers in DNA recognition: Structure of a six-finger TFIIIA complex" *PNAS* **95**, 2938-2931 (1998).
- Huse, M., Eck, M.J., Harrison, S.C. "A Zn²⁺ ion links the cytoplasmic tail of CD4 and the N-terminal region of p56^{lck}." *J. Biol. Chem.* **273**: 18729-18733 (1998).
- TerHaar, E., Musacchio, A., Harrison, S.C., Kirchhausen, T. "Atomic Structure of Clathrin: A β -Propeller Terminal Domain Joins an α -Zig-Zag Linker" *Cell* **95**: 563-573 (1998)
- Huang, H., Chopra, R., Verdine, G.L. and Harrison, S.C. "Structure of a Covalently-Trapped Catalytic Complex of HIV-1 Reverse Transcriptase: Implications for Nucleoside Analog Drug Resistance." *Science*, **282**: 1669-1675 (1998).
- Jacobs, M.D. and Harrison, S.C. "Structure of an NF κ B/I κ B α Complex" *Cell* **95**: 749-758 (1998).
- Weissenhorn, W., Dessen, A., Calder, L. J., Harrison, S. C., Skehel, J. J. and Wiley, D. C. "Structural basis for membrane fusion by enveloped viruses." *Molecular Membrane Biology* **16** (1) 3-9, (1999).
- Xu, W., Doshi, A., Lei, M., Eck, M.J., Harrison, S.C. "Crystal structures of c-Src reveal new features of its auto-inhibitory mechanism." *Molecular Cell*, **3**: 629-638, (1999).
- Ferrer, M. and Harrison, S.C. "Peptide Ligands to Human Immunodeficiency Virus Type-1 gp120 Identified from Phage Display Libraries" *J. Virol.* **73**: 5795-5802 (1999).
- Lawrence, C.M., Ray, S., Babyonyshev, M., Gallusser, R. Harrison, S.C. "Structure of the Ectodomain of Human Transferrin Receptor" *Science*, **286**: 779-782 (1999).
- Ferrer, M., Kapoor, T., Strassmaier, T., Weissenhorn, W., Skehel, J.J., Oprian, D., Schreiber, S., Wiley, D.C., Harrison, S.C. "Selection of gp41-Mediated HIV-1 Cell Entry Inhibitors From Biased Combinatorial Libraries of Non-Natural Binding Elements" *Nature Structural Biology* **6**: 953- 960 (1999).
- Musacchio, A., Smith, C.J., Roseman, A.M., Harrison, S.C., Kirchhausen, T., Pearse, B.M.F. "Functional Organization of Clathrin Coats: Combining Cryo-Electron Microscopy and X-ray Crystallography. *Molecular Cell* **3**: 761-770 (1999).
- Bauer, P.H., Cui, C., Stehle, T., Harrison, S.C., DeCaprio, J.A., Benjamin, T.L. "Discrimination between Sialic Acid-Containing Receptors and Pseudoreceptors Regulates Polyomavirus Spread in the Mouse" *J. Virol* **73**: 5826-5832 (1999).
- ter Haar, E., Harrison, S.C., Kirchhausen, T. "Peptide-in-groove interactions link target proteins to the β -propeller of clathrin" *PNAS* **97**: 1096-1100 (2000).
- Luongo, C.L., Reinisch, K.M., Harrison, S.C., Nibert, M.L. "Identification of the Guanylyltransferase Region and Active Site in Reovirus mRNA Capping Protein λ 2. *J. Biol. Chem.* **275**: 2804-2810 (2000).
- Chen, X.S., Garcea, R., Goldberg, I., Harrison, S.C. "Structure of small virus-like particles assembled from the L1 protein of human papillomavirus 16." *Molecular Cell* **5**: 557-567 (2000).
- Reinisch, K.M., Nibert, M., Harrison, S.C. " The Reovirus Core: Structure of a complex molecular machine." *Nature* **404**: 960-967 (2000).

- Chen, L., Rao, A., Harrison, S.C. "Signal Integration by Transcription-factor Assemblies: Interactions of NF-AT1 and AP-1 on the IL-2 Promoter" *Cold Spring Harbor Symposium on Quant. Biol.*, Vol. LXIV: 527-531. (2000).
- Huang, H. Harrison, S.C. and Verdine, G.L. "Trapping of a catalytic HIV reverse transcriptase-template:primer complex through a disulfide bond." *Chemistry & Biology* 7: 355-364 (2000).
- Dormitzer, P.R., Greenberg, H.B., Harrison, S.C. "Purified Recombinant Rotavirus VP7 Forms Soluble Calcium-Dependent Trimers" *Virology* 277: 420-428 (2000).
- Zhou, G., Ferrer, M., Chopra, R., Kapoor, T.M., Strassmaier, T., Weissenhorn, W., Skehel, J.J., Oprian, D., Schreiber S.L., Harrison, S.C., Wiley, D.C. "The Structure of an HIV-1 Specific Cell Entry Inhibitor in Complex with the HIV-1 gp41 Trimeric Core" *Bioorganic & Medicinal Chemistry*, 8: 2219-2227 (2000).
- Chen, B., Zhou, G, Kim, M, Chishti, Y, Hussey, R.E., Ely, B, Skehel, J.J., Reinherz, E.L., Harrison, S.C., Wiley, D.C. Expression, purification, and characterization of gp160, the soluble, trimeric, ectodomain of the SIV envelope glycoprotein, gp-160. *J. Biol. Chem.*, 275: 34946-34953 (2000).
- Lei, M., Lu, W., Meng, W., Parrini, M.-C., Eck, M.J., Mayer, B.J., Harrison, S.C. "Structure of PAK1 in an Autoinhibited Conformation Reveals a Multistage Activation Switch." *Cell* 102: 387-397 (2000).
- Chen, X.S., Casini, G., Harrison, S.C., Garcea, R.L. "Papillomavirus Capsid Protein Expression in Escherichia coli: Purification and Assembly of HPV11 and HPV16 L1" *J. Mol Biol.* 307:173-82 (2001).
- Lin, C.H., Hare, B.J., Wagner, G., Harrison, S.C., Maniatis, T., Fraenkel, E. "A Small domain of CBP/p300 Binds Diverse Proteins: Solution Structure and Functional Studies" *Molecular Cell* 8: 581-590 (2001).
- Harrison, S.C. "Principles of Virus Structure" in *Fields Virology*, Fourth Edition, 53-85. (D.M. Knipe, P.M. Howley, et al. Lippincott Williams & Wilkins Publishers, Philadelphia, (2001).
- Kim, M., Chen, B., Hussey, R. E., Chishti, Y., Montefiori, D., Hoxie, J. A., Byron, O., Campbell, G., Harrison, S.C., Reinherz, E. L. "The stoichiometry of trimeric SIV glycoprotein interaction with CD4 differs from that of anti-envelope antibody FAB fragments" *Journal of Biological Chemistry* 276(46), 42667-42676 (2001).
- Olland, A.M., Jané-Valbuena, J., Schiff, L.A., Nibert, M.L., Harrison, S.C. "Structure of the Reovirus Outer Capsid and dsRNA Binding Protein σ 3at 1.8 Å Resolution" *EMBO J.* 20: 979-989, (2001).
- Dormitzer, P.R., H.B. Greenberg, and S.C. Harrison. Proteolysis of monomeric recombinant rotavirus VP4 yields an oligomeric VP5* core. *J. Virol.* 75, 7339-7350 (2001).
- Ferlenghi, I., Clarke, M., Thomas, D., Ruttan, T., Allison, S.L., Schalich, J., Heinz, F., Harrison, S.C., Rey, F., Fuller, S. "Molecular organization of a recombinant subviral particle from tick-borne encephalitis virus" *Molecular Cell* 7: 593-602 (2001).
- Parrini, M.C., Lei, M., Harrison, S.C., Mayer, B.J. "Pak1 kinase homodimers are autoinhibited in trans and Dissociated upon activation by Cdc42 and Rac1" *Molecular Cell* 9: 73-83 (2002).
- Liemann, S, Chandran, K., Baker, T.S., Nibert, M., Harrison, S.C. "Structure of the reovirus membrane-penetration protein, μ 1, in a complex with its protector protein, σ 3." *Cell* 108: 283-295 (2002).
- Dormitzer, P.R., Z.-Y. J. Sun, G. Wagner, and S.C. Harrison. "The rhesus rotavirus VP4 sialic acid binding domain has a galectin fold with a novel carbohydrate binding site." *EMBO J* 21:885-897 (2002).
- Jin, L. and Harrison, S.C. "Structure of human calcineurin complexed with cyclosporin A and human cyclophilin" *PNAS* 99: 13522-13526 (2002).
- Modis, Y., Trus, B., and Harrison S.C. "Atomic model of the papillomavirus capsid" *EMBO J.* 21: 4754-4762 (2002).
- Tao, Y., Farsetta, D.L., Nibert, M.L. and Harrison, S.C. "RNA synthesis in a cage-- structural studies of reovirus polymerase λ 3" *Cell*, 111, 733-745, (2002).
- Harrison, S.C. "Don C. Wiley (1944-2001)". *Molecular Cell* 9: 225-227 (2002).
- Harrison. S.C. "Variation on a Src-like theme" *Cell* 112: 737-740 (2003) Review.

- Sliz, P., Harrison, S.C. and Rosenbaum, G. "How does radiation damage in protein crystals depend on X-ray dose?" *Structure*, **11**: 13-19 (2003).
- Odegard AL, Chandran K, Liemann S, Harrison SC, Nibert ML. Disulfide bonding among μ 1 trimers in mammalian reovirus outer capsid: a late and reversible step in virion morphogenesis. *J Virol* **77**: 5389 – 5400. (2003).
- Modis, Y., Ogata, S., Clements, D., and Harrison, S.C. "A ligand-binding pocket in the dengue virus envelope glycoprotein" *PNAS* **100**: 6986-6991 (2003).
- Jin, L., Sliz, P., Chen, L., Macián, F., Rao, A., Hogan, P.G., Harrison, S.C. "An asymmetric dimmer on a pseudo-palindromic kb-like DNA site" *Nature Structural Biology* **10**: 807-811 (2003).
- Espelin, C.W., Simons, K.T., Harrison, S.C., Sorger, P.K. "Binding of the essential *Saccharomyces cerevisiae* kinetochore protein Ndc10p to CDEII" *Mol. Biol. Cell* **14**: 4557-4568 (2003).
- Allison, S.L., Tao, Y.J., O'Riordan, G., Mandl, C.W., Harrison, S.C., Heinz, F.X. "Two distinct size classes of immature and mature subviral particles from tick-borne encephalitis virus." *J. Virol.* **77**: 11357-11366 (2003).
- Kim, J., Tao, Y., Reinisch, K.M., Harrison, S.C., Nibert, M.L. Orthoreovirus and Aquareovirus core proteins: conserved enzymatic surfaces, but not protein-protein interfaces. *Virus Research* **101**(39): 15-28 (2004).
- Harrison, S.C. "Whither structural biology?" *Nature Structural and Molecular Biology* **11**: 12-15 (2004).
- Van den Berg, B., Clemons, W.M., Jr., Collinson, I., Modis, Y., Hartmann, E., Harrison, S.C., Rapoport, T.A. "X-ray structure of a protein-conducting channel" *Nature* **427**: 36-44 (2004).
- Modis, Y., Ogata, S., Clements, D. & Harrison, S.C. Structure of the dengue virus envelope glycoprotein after membrane fusion. *Nature*, **427**: 313-319 (2004).
- Cheng, Y., Zak, O., Aisen, P., Harrison, S.C., Walz, T., "Structure of the human transferrin receptor-transferrin complex" *Cell* **116**: 565-576. (2004).
- Chen, B., Cheng, Y., Calder, L., Harrison, S.C., Reinherz, E.L., Skehel, J.J., Wiley, D.C. "A Chimeric Protein of Simian Immunodeficiency Virus Envelope glycoprotein gp140 and *Escherichia coli* Aspartate Transcarbamoylase" *Journal of Virology* **78**: 4508-4516 (2004).
- D. B. Lacy, D. J. Wigelsworth, R. A. Melnyk, S. C. Harrison, and R. John Collier (2004) Structure of heptameric protective antigen bound to an anthrax toxin receptor: A role for receptor in pH-dependent pore formation. *Proc Natl Acad Sci U S A* **101**, 13147-51 (2004).
- Dormitzer, P., Nason, E.B., Prasad, B.V.V., Harrison, S.C. "Structural rearrangements in the membrane penetration protein of a non-enveloped virus" *Nature* **430**: 1053-1058 (2004).
- Fotin, A., Cheng, Y., Sliz, P., Grigorieff, N., Harrison, S.C., Kirchhausen, Walz, T. "Molecular model for a complete clathrin lattice from electron cryomicroscopy" *Nature* **432**: 573-579 (2004).
- Fotin, A., Cheng, Y., Grigorieff, N., Walz, T., Harrison, S.C., Kirchhausen, T. "Structure of an auxilin-bound clathrin coat and its implications for the mechanism of sorting" *Nature* **432**: 649-653 (2004).
- Heldwein, E., Macia, E., Wang, J., Yin, H., Kirchhausen, T., Stephen Harrison, S.C.. "Crystal structure of the clathrin adaptor AP-1 core." *PNAS*, **101**: 14108-14113 (2004).
- Panne, D., Maniatis, T. and Harrison, S.C. "Crystal structure of ATF-2/c-Jun and IRF-3 bound to the interferon- β enhancer" *EMBO J.*, **23**: 4384-4393 (2004).
- Larsen, N. and Harrison, S.C. "Crystal Structure of the Spindle Assembly Checkpoint Protein Bub3 ." *J. Mol. Biol.* **344**: 885-892 (2004).
- Arnett, K. and Harrison, S.C. "Crystal structure of a human CD3- ϵ/δ dimer in complex with a UCHT1 single-chain antibody fragment. " *PNAS*, **101**: 16268-16273 (2004).

- Harrison, S.C., Alberts, B., Ehrenfeld, E., Enquist, L., Fineberg, H., McKnight, S.L., Moss, B., O'Donnell, M., Ploegh, H., Schmid, S.L., Walter, K.P., Theriot, J. Discovery of antivirals against smallpox. *PNAS* Vol 101 No. 31 pages 11178-11192 (2004).
- Modis, Y., Ogata, S., Clements, D., Harrison, S.C. "Variable Surface Epitopes in the Crystal Structure of Dengue Virus Type 3 Envelope Glycoprotein." *J. Virol.* **79**: 1223-1231 (2005).
- Miranda, J.J.L., DeWulf, P., Sorger, P.K., Harrison, S.C. "The yeast DASH complex forms closed rings on microtubules" *Nature Structural & Molecular Biology* **12**: 138-143 (2005).
- Chen, B., Vogan, E.M., Gong, H., Skehel, J.J., Wiley, D.C., Harrison, S.C. "Structure of an unliganded simian immunodeficiency virus gp120 core" *Nature* **433**: 834-841 (2005).
- Chen, B., Vogan, E.M., Gong, H., Skehel, J.J., Wiley, D.C., Harrison, S.C. "Determining the structure of an unliganded and fully-glycosylated SIV gp-120 envelope glycoprotein" *Structure* **13**: 197-211 (2005).
- Wei, R.R., Sorger, P.K., Harrison, S.C. "Molecular organization of the Ndc80 complex, an essential kinetochore component" *PNAS* **102**: 5262-5367 (2005).
- Lei, M., Robinson, M., Harrison, S.C. "The Active Conformation of the PAK1 Kinase Domain" *Structure* **13**: 1-10 (2005).
- Harrison, S.C. "Mechanism of Membrane Fusion by Viral Envelope Proteins" in *Advances in Virus Research*, Vol. 64, 231-261; Elsevier, Inc. (2005).
- Gonen, T., Cheng, Y., Sliz, P., Hiroaki, Y., Fujiyoshi, Y., Harrison, S.C., Walz, T. "Lipid-protein interactions in double-layered two-dimensional ASPO crystals" *Nature* **438**: 633-638 (2005).
- Li, F., Farzan, W., Harrison, S.C. "Structure of SARS Coronavirus Spike Receptor-Binding Domain Complexed with Receptor" *Science* **309**: 1864-1868 (2005).
- Zhang, X., Zhang, L., Harrison, S.C., Marinescu, D.C., Nibert, M.L., Baker, T.S. "Features of reovirus outer capsid protein $\mu 1$ revealed by electron cryomicroscopy and image reconstruction of the virion at 7.0 Å" *Structure* **13**: 1545-1557 (2005).
- Fotin, A., Kirchhausen, T., Grigorieff, N., Harrison, S.C., Walz, T., Cheng, Y. Structure determination of clathrin coats to subnanometer resolution by single particle cryo-electron microscopy. *J. Struct. Biol.* **156**(3): 453-460 (2006).
- Al-Bassam, J., van Breugel, M., Harrison, S.C., Hyman, A. "Stu2p binds tubulin and undergoes an open-to-closed conformational change." *J. Cell Biol.* **172**: 1009-1022 (2006).
- Wei, R.R., Schnell, J.R., Larsen, N.A., Sorger, P.K., Chou, J.J., Harrison, S.C. "Structure of a Central Component of the Yeast Kinetochore: The Spc24p/Spc25p Globular Domain." *Structure* **14**: 1003-1009 (2006).
- Heldwein, E.E., Huan, L., Bender, F.C., Cohen, G.H., Eisenberg, R.J., Harrison, S.C. "Crystal structure of glycoprotein B from Herpes Simplex Virus 1" *Science* **313**: 217-220. (2006)
- Li, F., Berardi, M., Li, W., Farzan, M., Dormitzer, P.D., Harrison, S.C. "Conformational States of the Severe Acute Respiratory Syndrome Coronavirus Spike Protein Ectodomain" *J. Virol* **80**: 6794-6800 (2006)
- Frey, G., Rits-Volloch, S., Zhang, X., Schooley, R., Chen, B., Harrison, S.C. "Small molecules that bind the inner core of gp41 and inhibit HIV envelope-mediated fusion." *PNAS*, **103** (38): 1938-1943 (2006).
- Rits-Volloch, S., Frey, G., Harrison, S.C., Chen, B. "Restraining the conformation of HIV-1 gp120 by removing a flexible loop" *EMBO J* **25**: 5026-5035 (2006).
- Zhang, L., Chandran, K., Nibert, M.L., Harrison, S.C. "Reovirus $\mu 1$ Structural Rearrangements That Mediate Membrane Penetration" *J. Virol* **80**: 12367-76 (2006).
- Li, H., Zhang, L., Rao, A., Harrison, S.C., Hogan, P.G. Structure of Calcineurin in Complex with PVIVIT Peptide: Portrait of a Low-affinity Signalling Interaction. *J. Mol. Biol.* **369**: 1296-1306 (2007).
- Cheng, Y., Boll, W., Kirchhausen, T., Harrison, S.C., Walz, T. Cryo-electron Tomography of Clathrin-coated Vesicles: Structural Implications for Coat Assembly. *J. Mol. Biol.* **365**: 892-899 (2007).

- Al-Bassam, J., Larsen, N.A., Hyman, A.A., Harrison, S.C. Crystal Structure of a TOG Domain: Conserved Features of XMAP215/Dis1-Family TOG Domains and Implications for Tubulin Binding. *Structure* **15**: 355-362 (2007).
- Larsen, N.A., Al-Bassam, J., Wei, R.R., Harrison, S.C. "Structural analysis of Bub3 interactions in the mitotic spindle checkpoint" *PNAS*, **104** (4): 1201-1206 (2007).
- Wei, R.R., Al-Bassam, J., Harrison, S.C. "The Ndc80/HEC1 complex is a contact point for kinetochore-microtubule attachment." *Nature Structural & Molecular Biology* **14** (1): 54-59 (2007).
- Harrison, S.C. "Principles of Virus Structure" in *Fields Virology*, Fifth Edition, 59-98. (D.M. Knipe, P.M. Howley, et al. Lippincott Williams & Wilkins Publishers, Philadelphia, (2007).
- Panne, D., Maniatis, T., Harrison, S.C. "An Atomic Model of the Interferon- β Enhanceosome" *Cell* **129**: 1111-1123 (2007).
- Miranda, J.L. King, D.S., Harrison, S.C. "Protein arms in the kinetochore-microtubule interface of the yeast DASH complex" *MBC*, **18**: 2503-2510 (2007).
- Bellizzi, III, J.J., Sorger, P.K., and Harrison, S.C. (2007). Crystal Structure of the Essential Core Kinetochore Protein Cep3p. *Structure*. **15**: 1422-1430 (2007).
- Harrison, S.C. Comments on the NIGMS PSI. *Structure* **15**: 1344-1346 (2007).
- Brouhard, G.L., Stear, J.H., Noetzel, T.L., Al-Bassam, J., Kinoshita, K., Harrison, S.C., Howard, J., Hyman, A.A. "XMAP215 Is a Processive Microtubule Polymerase." *Cell* **132**: 79-88 (2008). PMID: PMC 2311386
- Zhang, X., Settembre, E., Xu, C., Dormitzer, P.D., Bellamy, R., Harrison, S.C., Grigorieff, N. "Near atomic resolution using electron cryomicroscopy and single-particle reconstruction" *PNAS* **105**(6): 1867-1872 (2008). PMID: PMC 2542862
- Ivanovic, T., Agosto, M., Zhang, L., Chandran, K., Harrison, S.C., Nibert, M.L. "Peptides released from reovirus outer capsid form membrane pores that recruit virus particles." *The EMBO Journal* **27**(8): 1289-1298 (2008). PMID: PMC 2367403
- Harrison, S.C. "Viral Membrane Fusion" *Nature Structural & Molecular Biology* **15**: 690-698 (2008). PMID: PMC 2517140
- Floyd, D.L., Ragains, J.R., Skehel, J.J., Harrison, S.C., van Oijen, A.M. "Single-particle kinetics of influenza virus membrane fusion" *PNAS* **105** (40): 15382-87 (2008). PMID: PMC 2556630
- Cohen, R.L., Espelin, C.W., De Wulf, P., Sorger, P.K., Harrison, S.C., Simons, K.T. "Structural and functional dissection of Mif2p, a conserved DNA-binding kinetochore protein" *Mol. Biol. of the Cell*, **19**: 4480-4491 (2008). PMID: PMC 2555937
- Lu, X., McDonald, S.M., Tortorici, M.A., Tao, Y.J., Vasquez-Del Carpio, R., Nibert, M.L., Patton, J.T., Harrison, S.C. "Mechanism for coordinated RNA packaging and genome replication by rotavirus polymerase VP1" *Structure*, **16**: 1678-1688 (2008). PMID: PMC 2602806
- Aoki, S.T., Settembre, E.C., Trask, S.D., Greenberg, H.B., Harrison, S.C., Dormitzer, P.R. "Structure of Rotavirus Outer-Layer Protein VP7 Bound with a Neutralizing Fab" *Science* **324**: 1444-1447 (2009). PMID: PMC 2995306.
- Chen, J.Z., Settembre, E.C., Aoki, S.T., Zhang, X., Bellamy, A.R., Dormitzer, P.D., Harrison, S.C., Grigorieff, N. "Molecular interactions in rotavirus assembly and uncoating seen by high-resolution cryo-EM" *PNAS* **106** (26): 10644-10648 (2009). PMID: PMC 2689313
- Zhang, L., Agosto, M.A., Ivanovic, T., King, D.S., Nibert, M.L., Harrison, S.C. "Requirements for the Formation of Membrane Pores by Reovirus Myristoylated m1N Peptide" *J. Virol.* **83**: 7004-7014 (2009). PMID: PMC 2704788
- Alam, S.M., Morelli, M., Dennison, S.M., Liao, X-X., Zhang, R., Xia, S-M., Rits-Volloch, S., Sun, L., Harrison, S.C., Haynes, B.F., Chen, B. "Role of HIV membrane in neutralization by two broadly neutralizing antibodies." *PNAS* **106**(47): (2009). PMID: PMC 2787149
- Xing, Y., Böcking, T., Wolf, M., Grigorieff, N., Kirchhausen, T., Harrison, S.C. "Structure of clathrin coat with bound Hsc70 and auxilin: mechanism of Hsc70-facilitated disassembly." *EMBO J.* **29**(3): 655-665 (2009). PMID: PMC 2830701

- Yoder, J.D., Trask, S.D., Vo, P.T., Binka, M., Feng, N., Harrison, S.C., Greenberg, H.B., Dormitzer P.D. "VP5* Rearranges when Rotavirus Uncoats." *J. Virol.* 83(21): 11372-11377 (2009). PMID: PMC 2772785
- Trask, S.D., Kim, I.S., Harrison, S.C., Dormitzer, P.D. "A Rotavirus Spike Protein Conformational Intermediate Binds Lipid Bilayers." *J. Virol.* 84(4): 1764-1770 (2010). PMID: PMC 2812363
- McClain, B., Settembre, E., Temple, B.R.S., Bellamy, A.R., Harrison, S.C. "X-ray Crystal Structure of the Rotavirus Inner Capsid Particle at 3.8 Å Resolution." *Journal of Molecular Biology* 397: 587-599 (2010). PMID: PMC 2860780
- Abraham, J., Corbett, K.D., Farzan, M., Choe, H., Harrison, S.C. "Structural basis for receptor recognition by New World hemorrhagic fever arenaviruses." *Nat. Struct. Mol. Biol* 17 (4): 438-444 (2010). PMID: PMC 2920743
- Wolf, M., Garcea, R.L., Grigorieff, N., Harrison, S.C. "Subunit interactions in bovine papillomavirus." *PNAS* 107(14): 6298-6803 (2010). PMID: PMC 2852008
- Schmidt, A.G., Yang, P.L., Harrison, S.C. "Peptide Inhibitors of Dengue-Virus Entry Target a Late-Stage Fusion Intermediate." *PLoS Pathog* 6(4): e1000851 (2010). PMID: PMC 2851732
- Kim, I.S., Trask, S.T., Babyonyshev, M., Dormitzer, P.R., Harrison, S.C. Effect of Mutations in VP5* Hydrophobic Loops on Rotavirus Cell Entry. *J. Virol.* 84(12): 6200-6207 (2010). PMID: PMC 2876642
- Al-Bassam, J., Kim, H., Brouhard, G., van Oijen, A., Harrison, S.C., Chang, F. CLASP Promotes Microtubule Rescue by Recruiting Tubulin Dimers to the Microtubule. *Developmental Cell* 19: 245-258 (2010). PMID: PMC 3156696.
- Corbett, K.D., Yip, C.K., Ee, L., Walz, T., Amon, A., Harrison, S.C. The Monopolin Complex Crosslinks Kinetochore Components to Regulate Chromosome-Microtubule Attachments. *Cell* 142: 556-567 (2010). PMID: PMC 2955198.
- Guan, R., Dai, H., Harrison, S.C., Kirchhausen, T. "Structure of the PTEN-like Region of Auxilin, a Detector of Clathrin-Coated Vesicle Budding. *Structure* 18: 1191-1198 (2010). PMID: PMC 2955424
- Schmidt, A.G., Yang, P.L., Harrison, S.C. "Peptide Inhibitors of Flavivirus Entry Derived from the E-Protein Stem *J. Virol* 84(24): 12549-54 (2010). PMID: PMC 2851732.
- Floyd, D.L., Harrison, S.C., van Oijen, A.M. Analysis of Kinetic Intermediates in Single-Particle Dwell-Time Distributions. *Biophysical Journal* 99: 360-366 (2010). PMID: PMC 2905077
- Settembre, E.C., Chen J.Z., Dormitzer, P.D., Grigorieff, N., Harrison, S.C. Atomic model of an infectious rotavirus particle *EMBO Journal* 30(2): 408-416 (2011). PMID: PMC 3025467.
- Grigorieff, N., Harrison, S.C. Near-atomic resolution reconstructions of icosahedral viruses from electron cryomicroscopy. *Current Opinion in Structural Biology* 21: 265-273 (2011). PMID: PMC 3088881
- Böcking, T., Aguet, F., Harrison, S.C., Kirchhausen, T. Single-molecule analysis of a molecular disassemblase reveals the mechanism of Hsc70-driven clathrin uncoating. *Nature Structural & Molecular Biology* 18(3): 295-301 (2011). PMID: PMC 3056279.
- Whittle, J.R.R., Zhang, R., Khurana, S., King, L.R., Manischewitz, J., Golding, H., Dormitzer, P.D., Haynes, B.F., Walter, E.B., Moody, M.A., Kepler, T.B., Liao, H-X., Harrison, S.C. "Broadly neutralizing human antibody that recognizes the receptor-binding pocket of influenza virus hemagglutinin. *PNAS* EEd.: 1-6 (2011). PMID: PMC 3161572.
- Cho, U-S., Harrison, S.C. Recognition of the centromere-specific histone Cse-4 by the chaperone Scm3. *PNAS* 108(23): 9367-9371 (2011). PMID: PMC 3111289.
- Berardi, M. J., Shih, W. M., Harrison, S. C., Chou, J. J. Mitochondrial uncoupling protein 2 structure determined by NMR molecular fragment searching. *Nature* 476: 109-114 (2011). PMID: PMC 3150631
- Aoki, S.T., Trask, S.D., Coulson, B.S., Greenberg, H.B., Dormitzer, P.R., Harrison, S.C. Cross-linking of rotavirus outer capsid protein VP7 by antibodies or disulfides inhibits viral entry. *Journal of Virology* 85(20): 10509-10517 (2011). PMID: PMC 3187514
- Cho, U.S., Corbett, K.D., Al-Bassam, J., Bellizzi, J.J. 3rd, De Wulf, P., Espelin, C.W., Miranda, J.J., Simons, K., Wei, R.R., Sorger, P.K., Harrison, S.C. Molecular structures and interactions in the yeast kinetochore. *Cold Spring Harbor Symposium on Quantitative Biology* 75: 395-401 (2011).

- Schmitzberger, F. and Harrison, S.C. "RWD domain: a recurring module in kinetochore architecture shown by a Ctf19-Mcm21 complex structure" *EMBO reports* 13(3): 216-222 (2012). PMID: PMC 3323139.
- Cho, U-S., Harrison, S.C. "Ndc10 is a platform for inner kinetochore assembly in budding yeast" *NSMB* 19: 48-55 (2012). PMID: PMC 3252399.
- Ivanovic, T., Rozendaal, R., Floyd, D. L., Popovic, M., van Oijen, A. M., Harrison, S. C. Kinetics of proton transport into influenza virions by the viral M2 channel. *PLoS One* 7(3): 1-9 (2012). PMID: PMC 3295812
- Schmidt, A. G., Lee, K., Yang, P. L., Harrison, S. C. Small-molecule inhibitors of dengue-virus entry. *PLoS Pathogens* 8(4): 1-10 (2012). PMID: PMC3320583
- Haynes, B.F., Kelsoe, G., Harrison, S.C., Kepler, T.B. B-cell-lineage immunogen design in vaccine development with HIV-1 as a case study. *Nature Biotechnology* 10 (5): 423 (2012).
- Corbett, K.D. and Harrison, S.C. Molecular Architecture of the Yeast Monoplin Complex. *Cell Reports* 1: 583-589 (2012). PMID: PMC3494995
- Schmidt, A.G., Xu, H., Khan, A.R., O'Donnell, T., Khurana, S., King, L.R., Manischewitz, J., Golding, H., Suphaphiphat, P., Carfi, A., Settembre, E.C., Dormitzer, P.D., Kepler, T.B., Zhang, R., Moody, M.A., Haynes, B.F., Liao, H-X., Shaw, D.E., Harrison, S.C. Preconfiguration of the antigen-binding site during affinity maturation of a broadly neutralizing influenza virus antibody. *PNAS* 110 (1): 264-269 (2013). PMID: PMC3538208
- Estrozi, L.F., Settembre, E.C., Goret, G., McClain, B., Zhang, X., Chen, J.Z., Grigorieff, N., Harrison, S.C. Location of the dsRNA-Dependent Polymerase, VP1, in Rotavirus Particles. *J. Mol. Biol.* 425: 124-132 (2013). PMID: PMC3540981
- Alam, S.M., Liao, H-X., Tomaras, G.D., Bonsignori, M., Tsao, C-Y., Hwang, K-K., Chen, H., Lloyd, K.E., Bowman, C., Sutherland, L., Jeffries, T.L., Kozonk, D.M., Stewart, S., Anasti, K., Jaeger, F.H., Parks, R., Yates, N.L., Overman, R.G., Sinangil, F., Berman, P.W., Pitisuttihum, P., Kaewkungwal, J., Nitayaphan, S., Karasavva, N., Reks-Ngarm, S., Kim, J.H., Michael, N.L., Zolla-Pasner, S., Santra, S., Letvin, N.L., Harrison, S.C., Haynes, B.F. Antigenicity and Immunogenicity of RV144 Vaccine AIDSVAX Clade E Envelope Immunogen is Enhanced by a gp120 N-Terminal Deletion. *J. Virol.* 87(3): 1554-1568 (2013). PMID: PMC3554162
- Klein, D.E., Choi, J.L., Harrison, S.C. Structure of a Dengue Virus Envelope. *J. Virol.* 87(4): 2287-2293 (2013). PMID: PMC3571469
- Ivanovic, T., Choi, J.L., Whelan, S.P., vanOijen, A.M., Harrison, S.C. Influenza-virus fusion by cooperative fold-back of stochastically induced hemagglutinin intermediates. *eLife* 1: 1-20 (2013). PMID: PMC3578201
- Hinshaw, S.M. and Harrison, S.C. An Imi3-Chi4 Heterodimer Links the Core Centromere to Factors Required for Accurate Chromosome Segregation. *Cell Reports* 5: 1-8 (2013). PMID: PMC3888643
- Fera, Daniela, Schmidt, Aaron G., Haynes, Barton, F., Gao, Feng, Liao, Hua-Xin, Kepler, Thomas B., and Harrison, Stephen C. Affinity maturation in an HIV broadly neutralizing B-cell lineage through reorientation of variable domains. *PNAS* 111 (28): 10275-80. (2014). PMID: PMC4104889
- Abdelhakim, A.H., Salgado, E.N., Fu, X., Pasham, M., Nicastro, D., Kirchhausen, T., Harrison, S.C. Structural Correlates of Rotavirus Cell Entry *PLOS Pathogens* 10(9): e1004355 (2014). PMID: PMC25211455
- Chao LH, Klein DE, Schmidt AG, Pena JM, Harrison SC (2014) Sequential conformational rearrangements in flavivirus membrane fusion. *eLife* (2014). PMID: PMC4293572
- Kirchhausen, T., Owen, D., Harrison, S.C. Molecular Structure, Function, and Dynamics of Clathrin-Mediated Membrane Traffic. *Cold Spring Harbor Perspect Biol* 6:a016725 (2014).
- Kovacs, J.M., Noeldeke, E., Ha, H.J., Peng, H. Rits-Volloch, S., Harrison, S.C., Chen, B. Stable, uncleaved HIV-1 envelope glycoprotein gp140 forms a tightly folded trimer with a native-like structure. *PNAS* 111(52): 18542-18547 (2014). PMID: PMC4284565
- Xu H*, Schmidt AG*, O'Donnell T*, Therkelsen MD, Moody MA, Haynes BF, Liao HX, Harrison SC and Shaw DE. Key mutations for stabilizing the antigen-binding conformation during affinity maturation of a broadly neutralizing influenza antibody lineage. *Proteins: Structure, Function, and Bioinformatics* (2014). PMID: PMC4368477

- Wang, Q., Vogan E.M., Nocka, L.M., Rosen, C.E., Zorn, J.A., Harrison, S.C., Kuriyan, J. Auto inhibition of Bruton's tyrosine kinase (Btk) and activation by soluble inositol hexakisphosphate. *eLife* 4: 1-31 (2015). PMID: PMC4384635
- Harrison, S.C. Viral membrane fusion. *Virology*, (2015) PMID: PMC4424100
- Liang, B., Li, Z., Jenni, S., Rahmeh, A.A., Morin, B.M., Grant, T., Grigorieff, N., Harrison, S.C., Whelan, S.P.J. Structure of the L Protein of Vesicular Stomatitis Virus from Electron Cryomicroscopy. *Cell* 162: 314-327 (2015). PMID: PMC4557768
- Schmidt, A.G., Therkelsen, M.D., Stewart, S., Kepler, T.B., Liao, H-X., Moody, M.A., Haynes, B.F., Harrison, S.C. Viral Receptor-Binding Site Antibodies with Diverse Germline Origins. *Cell* 161: 1026-1034 (2015). PMID: PMC4441819
- Hinshaw, S.M., Makrantonis, V., Kerr, A., Marston, A.L., Harrison, S.C. Structural evidence for Scc4-dependent localization of cohesion loading. *eLife* 06057: 1-14 (2015). PMID: PMC4471937
- Mahmutovic, S., Clark, L., Levis, S.C., Briggiler, A.M., Enria, D.A., Harrison, S.C., Abraham, J.A. Molecular basis for antibody-mediated neutralization of New World hemorrhagic fever mammarenaviruses *Cell Host and Microbe* 18: 705-13 (2015). PMID: PMC4685251
- Schmidt, A.G., Do, T.K., McCarthy, K.R., Kepler, T.B., Liao, H-X., Moody, M.A., Haynes, B.F., Harrison, S.C., Immunogenic stimulus for germline precursors of influenza-specific antibodies. *Cell Reports* 13:2842-50 (2015). PMID: PMC4698027
- Ivanovic, T., Harrison, S.C. Distinct functional determinants of influenza hemagglutinin-mediated membrane fusion *Elife* Nov 27;4 (2015) eLife 2: e00333. PMID: PMC3578201
- Bradley, T., Fera, D., Bhiman, J., Eslamizar, L., Lu, X., Anasti, K., Zhang, R., Sutherland, L.L., Scearce, R.M., Bowman, C.M., Stolarchuk, C., Lloyd, K.E., Parks, R., Eaton, A., Foulger, A., Nie, X., Karim, S.S.A., Barnett, S., Kelsoe, G., Kepler, T.B., Alam, S.M., Montefiori, D.C., Moody, M.A., Liao, X-H., Morris, L., Santra, S., Harrison, S.C., Haynes, B.F. Structural Constraints of Vaccine-Induced Tier-2 Autologous HIV Neutralizing Antibodies Targeting the Receptor-Binding Site. *Cell Reports* 14: 43-54 (2016). doi:10.1016/j.celrep.2015.12.017
- Kuraoka, M., Schmidt A.G., Nojima T., Feng, F., Watanabe, A., Kitamura, D., Harrison, S.C., Kepler T.B., and Kelsoe G. Complex Antigens Drive Permissive Clonal Selection in Germinal Centers, *Immunity* 44: 1-11 (2016). doi:10.1016/j.immuni.2016.02.010