Hepatitis C virus NS5A: tales of a promiscuous protein

DOI: 10.1099/vir.0.80204-0
Journal of General Virology, 2004, 85, 2485-2502.

#	Paper	IF	Citations
344	Genetic diversity and evolution of hepatitis C virus--15 years on. *Journal of General Virology*, **2004**, 85, 3173-3188	4.9	701
343	Current World Literature. **2005**, 18, 436-478		
342	Structure of the zinc-binding domain of an essential component of the hepatitis C virus replicase. **2005**, 435, 374-9		401
341	Unravelling hepatitis C virus replication from genome to function. **2005**, 436, 933-8		654
340	Evasion of intracellular host defence by hepatitis C virus. **2005**, 436, 939-45		524
339	Nonstructural protein 5A does not contribute to the resistance of hepatitis C virus replication to interferon alpha in cell culture. **2005**, 336, 131-6		15
338	N(pro) of classical swine fever virus is an antagonist of double-stranded RNA-mediated apoptosis and IFN-alpha/beta induction. **2005**, 340, 265-76		103
337	Function follows form: the structure of the N-terminal domain of HCV NS5A. **2005**, 42, 732-5		34
336	Hepatitis C virus genotype distribution in China: predominance of closely related subtype 1b isolates and existence of new genotype 6 variants. **2005**, 75, 538-49		123
335	Human VAP-B is involved in hepatitis C virus replication through interaction with NS5A and NS5B. **2005**, 79, 13473-82		162
334	Dynamics of hepatitis C virus NS5A quasispecies during interferon and ribavirin therapy in responder and non-responder patients with genotype 1b chronic hepatitis C. *Journal of General Virology*, **2005**, 86, 1067-1075	4.9	55
333	Hepatitis C virus NS5A-mediated activation of phosphoinositide 3-kinase results in stabilization of cellular beta-catenin and stimulation of beta-catenin-responsive transcription. **2005**, 79, 5006-16		118
332	Loss of interferon regulatory factor 3 in cells infected with classical swine fever virus involves the N-terminal protease, Npro. **2005**, 79, 7239-47		95
331	Further studies on hepatitis C virus NS5A-SH3 domain interactions: identification of residues critical for binding and implications for viral RNA replication and modulation of cell signalling. *Journal of General Virology*, **2005**, 86, 1035-1044	4.9	32
330	The therapeutic potential of NS3 protease inhibitors in HCV infection. **2005**, 14, 1129-44		41
329	Hepatitis C virus (HCV) NS5A protein downregulates HCV IRES-dependent translation. *Journal of General Virology*, **2005**, 86, 1015-1025	4.9	36
328	Perturbation of epidermal growth factor receptor complex formation and Ras signalling in cells harbouring the hepatitis C virus subgenomic replicon. *Journal of General Virology*, **2005**, 86, 1027-1033	4.9	20

327	The transcriptome of HCV replicon expressing cell lines in the presence of alpha interferon. **2005**, 335, 264-75	25
326	Salient molecular features of hepatitis C virus revealed. **2005**, 13, 528-34	7
325	Replication and Pathogenesis of Hepatitis C Virus. **2006**, 125-147	1
324	Proteases in Gastrointestinal Tissues. **2006**,	
323	Hepatitis C Viral Proteases And Inhibitors. **2006**, 153-181	1
322	Hepatitis C virus: virology and experimental systems. **2006**, 10, 773-91	4
321	The SH3 binding motif of HCV [corrected] NS5A protein interacts with Bin1 and is important for apoptosis and infectivity. **2006**, 130, 794-809	54
320	Hepatitis C virus NS5A protein--a master regulator?. **2006**, 130, 995-9	17
319	NMR structure and molecular dynamics of the in-plane membrane anchor of nonstructural protein 5A from bovine viral diarrhea virus. **2006**, 45, 2221-33	44
318	The protein phosphatase 2A represents a novel cellular target for hepatitis C virus NS5A protein. **2006**, 88, 651-62	30
317	. **2006**,	59
316	Flaviviruses. **2006**, 274-303	
315	Hepatitis C virus RNA replication is regulated by FKBP8 and Hsp90. **2006**, 25, 5015-25	195
314	Oxidative stress and apoptosis in hepatitis C: the core issue. **2006**, 41, 292-4	5
313	A target on the move: innate and adaptive immune escape strategies of hepatitis C virus. **2006**, 69, 129-41	102
312	Mechanistic link between the anti-HCV effect of interferon gamma and control of viral replication by a Ras-MAPK signaling cascade. **2006**, 43, 81-90	39
311	Understanding human immunodeficiency virus type 1 and hepatitis C virus coinfection. **2006**, 4, 21-30	15
310	HSV-1 based amplicon vectors as an alternative system for the expression of functional HCV proteins. **2006**, 6, 393-8	7

309	The alpha isoform of protein kinase CKI is responsible for hepatitis C virus NS5A hyperphosphorylation. **2006**, 80, 11305-12		68
308	Modulation of tumor necrosis factor by microbial pathogens. **2006**, 2, e4		148
307	Targets of emerging therapies for viral hepatitis B and C. **2006**, 10, 833-50		6
306	An 85-aa segment of the GB virus type C NS5A phosphoprotein inhibits HIV-1 replication in CD4+ Jurkat T cells. **2006**, 103, 15570-5		58
305	The NS5A protein of the hepatitis C virus genotype 1a is cleaved by caspases to produce C-terminal-truncated forms of the protein that reside mainly in the cytosol. **2006**, 281, 13449-13462		16
304	Expression of GB virus C NS5A protein from genotypes 1, 2, 3 and 5 and a 30 aa NS5A fragment inhibit human immunodeficiency virus type 1 replication in a CD4+ T-lymphocyte cell line. *Journal of General Virology*, **2007**, 88, 3341-3346	4.9	24
303	Impact of NS5A sequences of Hepatitis C virus genotype 1a on early viral kinetics during treatment with peginterferon- alpha 2a plus ribavirin. **2007**, 196, 998-1005		16
302	Hepatitis C virus NS5A is a direct substrate of casein kinase I-alpha, a cellular kinase identified by inhibitor affinity chromatography using specific NS5A hyperphosphorylation inhibitors. **2007**, 282, 5536-44		70
301	Pretreatment sequence diversity differences in the full-length hepatitis C virus open reading frame correlate with early response to therapy. **2007**, 81, 8211-24		101
300	Hepatitis C virus: quasispecies dynamics, virus persistance and antiviral therapy. **2007**, 17, 499-510		
299	Discovering Inter-Domain Paths between Hepatitis C Virus NS5A and Human Liver Proteins. **2007**,		
298	Nuclear factors are involved in hepatitis C virus RNA replication. **2007**, 13, 1675-92		129
297	Hepatitis C virus nonstructural protein 5A modulates the toll-like receptor-MyD88-dependent signaling pathway in macrophage cell lines. **2007**, 81, 8953-66		135
296	Studying hepatitis C virus: making the best of a bad virus. **2007**, 81, 8853-67		113
295	The nonstructural 5A protein of hepatitis C virus genotype 1b does not contain an interferon sensitivity-determining region. **2007**, 195, 432-41		27
294	Conserved determinants for membrane association of nonstructural protein 5A from hepatitis C virus and related viruses. **2007**, 81, 2745-57		30
293	Interferon-alpha and ribavirin resistance of Huh7 cells transfected with HCV subgenomic replicon. **2007**, 125, 109-13		10
292	Hepatitis C virus genetic variability in patients undergoing antiviral therapy. **2007**, 127, 185-94		21

291	The NS5A protein of hepatitis C virus represses gene expression of hRPB10alpha, a common subunit of host RNA polymerases, through interferon regulatory factor-1 binding site. **2007**, 129, 155-65		1
290	Regulation of positive-strand RNA virus replication: the emerging role of phosphorylation. **2007**, 129, 73-9		66
289	Heterogeneity of CK2 phosphorylation sites in the NS5A protein of different hepatitis C virus genotypes. **2007**, 47, 768-76		14
288	Viral Hepatitis. 819-956		
287	Hepatitis C virus proteins. *World Journal of Gastroenterology*, **2007**, 13, 2406-15	5.6	113
286	Identification of host genes involved in hepatitis C virus replication by small interfering RNA technology. **2007**, 45, 1413-21		115
285	Hepatitis C virus--biology, host evasion strategies, and promising new therapies on the horizon. **2007**, 27, 353-73		33
284	Hepatitis viruses: live and let die. **2007**, 27, 293-301		38
283	Evolution of hepatitis C virus non-structural 5A gene in the progression of liver disease to hepatocellular carcinoma. **2007**, 27, 1126-33		8
282	Diversity of hepatitis C virus genotype 1b in Buenos Aires, Argentina: description of a new cluster associated with response to treatment. **2008**, 80, 619-27		15
281	Heme oxygenase-1 suppresses hepatitis C virus replication and increases resistance of hepatocytes to oxidant injury. **2008**, 48, 1430-9		106
280	Genotype-dependent sensitivity of hepatitis C virus to inhibitors of the p7 ion channel. **2008**, 48, 1779-90		99
279	The hepatitis C virus non-structural protein NS5A alters the trafficking profile of the epidermal growth factor receptor. **2008**, 9, 1497-509		35
278	Viral evasion and subversion of pattern-recognition receptor signalling. **2008**, 8, 911-22		503
277	Monoclonal antibody recognizing N-terminal epitope of hepatitis C virus nonstructural 5B inhibits viral RNA replication. **2008**, 15, 305-13		4
276	Cutting the gordian knot-development and biological relevance of hepatitis C virus cell culture systems. **2008**, 71, 51-133		79
275	Disease progression in chronic hepatitis C: modifiable and nonmodifiable factors. **2008**, 134, 1699-714		163
274	Hepatitis C virus NS5A protein binds the SH3 domain of the Fyn tyrosine kinase with high affinity: mutagenic analysis of residues within the SH3 domain that contribute to the interaction. **2008**, 5, 24		29

273	The non-structural 5A protein of hepatitis C virus exhibits genotypic differences in interferon antagonism. **2008**, 49, 899-907		18
272	HCV core protein interacts with Dicer to antagonize RNA silencing. **2008**, 133, 250-8		37
271	NS5ATP9, a gene up-regulated by HCV NS5A protein. **2008**, 259, 192-7		18
270	Viruses associated with human cancer. **2008**, 1782, 127-50		235
269	Enhanced Ca2+ leak from ER Ca2+ stores induced by hepatitis C NS5A protein. **2008**, 368, 593-9		20
268	Identification of residues required for RNA replication in domains II and III of the hepatitis C virus NS5A protein. **2008**, 82, 1073-83		171
267	A single-amino-acid mutation in hepatitis C virus NS5A disrupting FKBP8 interaction impairs viral replication. **2008**, 82, 3480-9		51
266	Hepatitis C virus NS5A protein interacts with and negatively regulates the non-receptor protein tyrosine kinase Syk. *Journal of General Virology*, **2008**, 89, 1231-1242	4.9	23
265	The role of hepatitis C virus in the pathogenesis of hepatocellular carcinoma. **2008**, 1, 167-175		10
264	Regulation of hepatitis C virion production via phosphorylation of the NS5A protein. **2008**, 4, e1000032		313
263	Essential role of domain III of nonstructural protein 5A for hepatitis C virus infectious particle assembly. **2008**, 4, e1000035		363
262	A comparative cell biological analysis reveals only limited functional homology between the NS5A proteins of hepatitis C virus and GB virus B. *Journal of General Virology*, **2008**, 89, 1911-1920	4.9	4
261	Regulation of telomerase and telomeres: human tumor viruses take control. **2008**, 100, 98-108		83
260	Apoptotic signaling pathways as a target for the treatment of liver diseases. **2008**, 8, 1485-93		5
259	New developments in the discovery of agents to treat hepatitis C. **2008**, 8, 533-62		31
258	Plus-Strand RNA Viruses. **2008**, 63-136		6
257	The hepatitis C virus non-structural NS5A protein impairs both the innate and adaptive hepatic immune response in vivo. **2009**, 284, 28343-28351		29
256	Activation of ribosomal RNA transcription by hepatitis C virus involves upstream binding factor phosphorylation via induction of cyclin D1. **2009**, 69, 2057-64		21

255	Viruses within the Flaviviridae decrease CD4 expression and inhibit HIV replication in human CD4+ cells. **2009**, 183, 7860-9	34
254	Suppression of a pro-apoptotic K+ channel as a mechanism for hepatitis C virus persistence. **2009**, 106, 15903-8	56
253	Progress on New Hepatitis C Virus Targets: NS2 and NS5A. **2009**, 121-138	1
252	A conserved proline between domains II and III of hepatitis C virus NS5A influences both RNA replication and virus assembly. **2009**, 83, 10788-96	34
251	Hepatitis C virus NS5A protein is a substrate for the peptidyl-prolyl cis/trans isomerase activity of cyclophilins A and B. **2009**, 284, 13589-13601	134
250	Hepatitis C virus infection of T cells inhibits proliferation and enhances fas-mediated apoptosis by down-regulating the expression of CD44 splicing variant 6. **2009**, 199, 726-36	34
249	The marmoset model of GB virus B infections: adaptation to host phenotypic variation. **2009**, 83, 5806-14	14
248	Hepatitis C virus NS5A protein modulates template selection by the RNA polymerase in in vitro system. **2009**, 583, 277-80	9
247	Calpain activation by hepatitis C virus proteins inhibits the extrinsic apoptotic signaling pathway. **2009**, 50, 1370-9	29
246	Combined therapy of interferon plus ribavirin promotes multiple adaptive solutions in hepatitis C virus. **2009**, 81, 650-6	9
245	Characterization of monoclonal antibodies against the nonstructural 5A protein of hepatitis C virus. **2009**, 154, 843-51	3
244	Characterization and application of monoclonal antibodies to bovine viral diarrhea virus nonstructural protein 5A. **2009**, 154, 1745-54	3
243	Retracted: Genetic diversity in hepatitis C virus (HCV): A brief review. **2008**, 19,	5
242	Natural genetic engineering of hepatitis C virus NS5A for immune system counterattack. **2009**, 1178, 173-85	7
241	Quasispecies of hepatitis C virus genotype 1 and treatment outcome with peginterferon and ribavirin. **2009**, 9, 689-98	19
240	Targeting the non-structural proteins of hepatitis C virus: beyond hepatitis C virus protease and polymerase. **2009**, 4, 293-314	17
239	Compensatory mutations in NS3 and NS5A proteins enhance the virus production capability of hepatitis C reporter virus. **2009**, 145, 63-73	72
238	Hepatitis C virus-induced hepatocarcinogenesis. **2009**, 51, 810-20	114

237	Hepatitis C Virus Genome Replication. **2009**, 61-88		2
236	Purification and crystallization of NS5A domain I of hepatitis C virus. **2009**, 510, 85-94		4
235	Apoptosis: Involvement of Oxidative Stress and Intracellular Ca2+ Homeostasi. **2009**,		5
234	Hepatitis C. **2009**,		2
233	From Molecules to Medicines. **2009**,		
232	Molecular Biology of Hepatitis Viruses. 807-834		
231	The use of AlphaLISA technology to detect interaction between hepatitis C virus-encoded NS5A and cyclophilin A. **2010**, 165, 202-10		38
230	Evolution of hepatitis C virus NS5A region in breakthrough patients during pegylated interferon and ribavirin therapy*. **2010**, 17, 208-16		15
229	DNA immunization with a plasmid carrying the gene of hepatitis C virus protein 5A (NS5A) induces an effective cellular immune response. **2010**, 44, 245-253		10
228	Antiviral therapy for hepatitis C virus: beyond the standard of care. **2010**, 2, 826-66		35
227	DEB025 (Alisporivir) inhibits hepatitis C virus replication by preventing a cyclophilin A induced cis-trans isomerisation in domain II of NS5A. *PLoS ONE*, **2010**, 5, e13687	3.7	133
226	Sequencing of E2 and NS5A regions of HCV genotype 3a in Brazilian patients with chronic hepatitis. **2010**, 105, 92-8		8
225	New strategies for the treatment of hepatitis C virus infection and implications of resistance to new direct-acting antiviral agents. **2010**, 3, 133-45		3
224	All three domains of the hepatitis C virus nonstructural NS5A protein contribute to RNA binding. **2010**, 84, 9267-77		94
223	Bovine viral diarrhea virus non-structural protein 5A interacts with NIK- and IKKbeta-binding protein. *Journal of General Virology*, **2010**, 91, 1939-1948	4.9	26
222	Hepatitis C virus RNA replication is regulated by Ras-Erk signalling. *Journal of General Virology*, **2010**, 91, 671-80	4.9	19
221	Hepatitis C virus nonstructural protein 5A: biochemical characterization of a novel structural class of RNA-binding proteins. **2010**, 84, 12480-91		69
220	Resistance analysis of the hepatitis C virus NS5A inhibitor BMS-790052 in an in vitro replicon system. **2010**, 54, 3641-50		251

219	Tumor viruses and cancer biology: Modulating signaling pathways for therapeutic intervention. **2010**, 10, 961-78	90
218	Inhibition of hepatitis C virus replication by IFN-mediated ISGylation of HCV-NS5A. **2010**, 185, 4311-8	44
217	Prediction of prognostic biomarkers for interferon-based therapy to hepatitis C virus patients: a meta-analysis of the NS5A protein in subtypes 1a, 1b, and 3a. **2010**, 7, 130	14
216	Zinc mesoporphyrin induces rapid proteasomal degradation of hepatitis C nonstructural 5A protein in human hepatoma cells. **2010**, 138, 1909-19	24
215	Identification of hepatitis C virus NS5A inhibitors. **2010**, 84, 482-91	160
214	Dysfunctional gene/protein networks in hepatitis C virus-induced hepatocellular cirrhosis and carcinoma. **2010**,	3
213	An integrated methodology for mining promiscuous proteins: a case study of an integrative bioinformatics approach for hepatitis C virus non-structural 5A protein. **2010**, 680, 299-305	2
212	The successful immune response against hepatitis C nonstructural protein 5A (NS5A) requires heterologous DNA/protein immunization. **2010**, 28, 1987-96	12
211	Advances in Computational Biology. **2010**,	2
210	Hepatitis C virus non-structural protein 3 (HCV NS3): a multifunctional antiviral target. **2010**, 285, 22725-31	117
209	Distinct functions of NS5A in hepatitis C virus RNA replication uncovered by studies with the NS5A inhibitor BMS-790052. **2011**, 85, 7312-20	122
208	The NS5A replication complex inhibitors: difference makers?. **2011**, 15, 627-39	28
207	Anti-HCV drugs in the pipeline. **2011**, 1, 607-16	49
206	Chemical genetics. **2011**, 40, 4332-45	100
205	. **2011**,	9
204	Modulation of programmed cell death pathways by the hepatitis C virus. **2011**, 16, 608-18	12
203	The NS5A Domain II of HCV: Conservation of Intrinsic Disorder in Several Genotypes. **2011**, 409-424	1
202	Hepatitis C virus p7: molecular function and importance in hepatitis C virus life cycle and potential antiviral target. **2011**, 31, 606-17	14

201	Hepatitis C viral protein translation: mechanisms and implications in developing antivirals. **2011**, 31, 1449-67		27
200	Cell defense systems against oxidative stress and endoplasmic reticulum stress: Mechanisms of regulation and the effect of hepatitis C virus. **2011**, 45, 110-122		9
199	Hepatitis C virus-induced furin and thrombospondin-1 activate TGF-β1: role of TGF-β1 in HCV replication. **2011**, 412, 284-96		54
198	Chronic hepatitis C. **2011**, 5, 117-32		22
197	Comparative genomics identifies candidate genes for infectious salmon anemia (ISA) resistance in Atlantic salmon (Salmo salar). **2011**, 13, 232-41		46
196	Current Views on the Pathophysiology of GB Virus C Coinfection with HIV-1 Infection. **2011**, 13, 47-52		10
195	Genotypic and phenotypic analysis of variants resistant to hepatitis C virus nonstructural protein 5A replication complex inhibitor BMS-790052 in humans: in vitro and in vivo correlations. **2011**, 54, 1924-35		210
194	Multiple ascending dose study of BMS-790052, a nonstructural protein 5A replication complex inhibitor, in patients infected with hepatitis C virus genotype 1. **2011**, 54, 1956-65		162
193	Temporal variations in the hepatitis C virus intrahost population during chronic infection. **2011**, 85, 6369-80		65
192	Antiviral stilbene 1,2-diamines prevent initiation of hepatitis C virus RNA replication at the outset of infection. **2011**, 85, 5513-23		14
191	The role of Hepatitis C Virus in the dynamic protein interaction networks of hepatocellular cirrhosis and carcinoma. **2011**, 4, 5-18		12
190	Discovery of potent hepatitis C virus NS5A inhibitors with dimeric structures. **2011**, 55, 3795-802		46
189	The effects of NS5A inhibitors on NS5A phosphorylation, polyprotein processing and localization. *Journal of General Virology*, **2011**, 92, 2502-2511	4.9	52
188	Hepatitis C virus NS5A binds to the mRNA cap-binding eukaryotic translation initiation 4F (eIF4F) complex and up-regulates host translation initiation machinery through eIF4E-binding protein 1 inactivation. **2012**, 287, 5042-58		37
187	GB virus type C infection polarizes T-cell cytokine gene expression toward a Th1 cytokine profile via NS5A protein expression. **2012**, 206, 69-72		8
186	Regulation of neuronal proapoptotic potassium currents by the hepatitis C virus nonstructural protein 5A. **2012**, 32, 8865-70		16
185	Multiple mutations in hepatitis C virus NS5A domain II are required to confer a significant level of resistance to alisporivir. **2012**, 56, 5113-21		37
184	Direct acting antivirals for the treatment of chronic viral hepatitis. **2012**, 2012, 478631		5

183	HCV: days are numbered: next-generation direct-acting antivirals and host-targeting agents. *Antiviral Therapy*, **2012**, 17, 1133-46	1.6	5
182	Anti-hepatitis C virus drugs in development. **2012**, 142, 1340-1350.e1		75
181	Comprehensive analysis for viral elements and interleukin-28B polymorphisms in response to pegylated interferon plus ribavirin therapy in hepatitis C virus 1B infection. **2012**, 56, 1611-21		19
180	Classical swine fever virus NS5A protein localizes to endoplasmic reticulum and induces oxidative stress in vascular endothelial cells. **2012**, 45, 274-82		22
179	Effect on hepatitis C virus replication of combinations of direct-acting antivirals, including NS5A inhibitor daclatasvir. **2012**, 56, 5230-9		61
178	Hepatitis C viral protein NS5A induces EMT and participates in oncogenic transformation of primary hepatocyte precursors. **2012**, 57, 1021-8		56
177	NS5A: a new target for antiviral drugs in the treatment of hepatitis C virus infection. **2012**, 56, 797-9		7
176	Hepatitis C virus: the role of molecular mimicry in response to interferon treatment. **2012**, 84, 1571-85		2
175	Structural and molecular basis of interaction of HCV non-structural protein 5A with human casein kinase 1 and PKR. **2012**, 12, 28		11
174	NS5A sequence heterogeneity of hepatitis C virus genotype 4a predicts clinical outcome of pegylated-interferon-ribavirin therapy in Egyptian patients. **2012**, 50, 3886-92		17
173	Therapeutic potential of RNA interference: a new molecular approach to antiviral treatment for hepatitis C. **2012**, 19, 757-65		21
172	NS5A Inhibitors. **2012**, 11, 181-187		
171	Polymorphisms of hepatitis C virus non-structural protein 5A and core protein and clinical outcome of pegylated-interferon/ribavirin combination therapy. **2012**, 55, 1-11		22
170	Chronic Hepatitis C Virus. **2012**,		2
169	Order and disorder in viral proteins: new insights into an old paradigm. **2012**, 7, 1183-1191		7
168	Future classes of hepatitis C virus therapeutic agents. **2012**, 26, 949-66		2
167	New insights regarding HCV-NS5A structure/function and indication of genotypic differences. **2012**, 9, 14		10
166	Using SILAC and quantitative proteomics to investigate the interactions between viral and host proteomes. **2012**, 12, 666-72		50

165	Prediction of response to pegylated interferon/ribavirin combination therapy for chronic hepatitis C genotype 1b and high viral load. **2012**, 47, 1143-51	14
164	Impact of a baseline polymorphism on the emergence of resistance to the hepatitis C virus nonstructural protein 5A replication complex inhibitor, BMS-790052. **2012**, 55, 1692-9	45
163	The long way toward understanding host and viral determinants of therapeutic success in HCV infection. **2012**, 6, 436-40	1
162	RETRACTED ARTICLE: Bovine viral diarrhea virus nonstructural protein 5A is phosphorylated by cdc2 cyclin-dependent kinase in vitro. **2012**, 157, 797	
161	Longitudinal analysis of the 5NUTR, E2-PePHD and NS5A-PKRBD genomic regions of hepatitis C virus genotype 1a in association with the response to peginterferon and ribavirin therapy in HIV-coinfected patients. **2012**, 95, 72-81	8
160	New therapies for chronic hepatitis C infection: a systematic review of evidence from clinical trials. **2012**, 66, 342-55	48
159	Nonstructural 5A protein of hepatitis C virus regulates heat shock protein 72 for its own propagation. **2012**, 19, 353-63	11
158	Model membrane platforms for biomedicine: case study on antiviral drug development. **2012**, 7, 18	33
157	Characterizations of HCV NS5A replication complex inhibitors. **2013**, 444, 343-54	39
156	Impact of host and virus genome variability on HCV replication and response to interferon. **2013**, 3, 501-7	5
155	NS5A inhibitor, daclatasvir, for the treatment of chronic hepatitis C virus infection. **2013**, 22, 1337-46	27
154	Analysis of sequences of hepatitis C virus NS5A genotype 1 in HIV-coinfected patients with a null response to nitazoxanide or peg-interferon plus ribavirin. **2013**, 158, 1907-15	3
153	Identification of a previously undescribed divergent virus from the Flaviviridae family in an outbreak of equine serum hepatitis. **2013**, 110, E1407-15	111
152	Antiviral activity and resistance of HCV NS5A replication complex inhibitors. **2013**, 3, 514-20	116
151	The unexpected roles of eukaryotic translation elongation factors in RNA virus replication and pathogenesis. **2013**, 77, 253-66	68
150	Polymorphisms of the core, NS3, and NS5A proteins of hepatitis C virus genotype 1b associate with development of hepatocellular carcinoma. **2013**, 58, 555-63	23
149	Over-expression and characterization of NS3 and NS5A of Hepatitis C virus genotype 3a. **2013**, 12, 111	4
148	A synthetic codon-optimized hepatitis C virus nonstructural 5A DNA vaccine primes polyfunctional CD8+ T cell responses in wild-type and NS5A-transgenic mice. **2013**, 190, 1113-24	11

147	Hepatitis C and Hepatocellular Carcinoma. **2013**, 353-361		
146	Hepatitis C virus proteins: from structure to function. **2013**, 369, 113-42		189
145	Hepatitis C virus-specific directly acting antiviral drugs. **2013**, 369, 289-320		24
144	Modeling shows that the NS5A inhibitor daclatasvir has two modes of action and yields a shorter estimate of the hepatitis C virus half-life. **2013**, 110, 3991-6		254
143	Ca(2+) /S100 proteins regulate HCV virus NS5A-FKBP8/FKBP38 interaction and HCV virus RNA replication. **2013**, 33, 1008-18		8
142	The C terminus of NS5A domain II is a key determinant of hepatitis C virus genome replication, but is not required for virion assembly and release. *Journal of General Virology*, **2013**, 94, 1009-1018	4.9	36
141	The molecular and structural basis of advanced antiviral therapy for hepatitis C virus infection. **2013**, 11, 482-96		290
140	Regulation of hepatitis C virus replication by nuclear translocation of nonstructural 5A protein and transcriptional activation of host genes. **2013**, 87, 5523-39		17
139	Lipid droplet-binding protein TIP47 regulates hepatitis C Virus RNA replication through interaction with the viral NS5A protein. **2013**, 9, e1003302		79
138	A novel hepacivirus with an unusually long and intrinsically disordered NS5A protein in a wild Old World primate. **2013**, 87, 8971-81		73
137	Role of hepatitis C virus substitutions and interleukin-28B polymorphism on response to peginterferon plus ribavirin in a prospective study of response-guided therapy. **2013**, 20, 761-9		6
136	Daclatasvir, an efficient inhibitor of the hepatitis C virus replication complex protein NS5A: review of virologic data, treatment rationale and clinical trials. **2013**, 3, 191-207		6
135	An insight into the diagnosis and pathogenesis of hepatitis C virus infection. *World Journal of Gastroenterology*, **2013**, 19, 7896-909	5.6	43
134	[Interaction between HIV-1 and GB virus type-C during coinfection status]. **2013**, 30, 31-41		2
133	Active RNA replication of hepatitis C virus downregulates CD81 expression. *PLoS ONE*, **2013**, 8, e54866	3.7	6
132	Nonstructural 5A protein of hepatitis C virus interacts with pyruvate carboxylase and modulates viral propagation. *PLoS ONE*, **2013**, 8, e68170	3.7	7
131	Sensitivity of a ribavirin resistant mutant of hepatitis C virus to other antiviral drugs. *PLoS ONE*, **2013**, 8, e74027	3.7	4
130	GPS2 is required for the association of NS5A with VAP-A and hepatitis C virus replication. *PLoS ONE*, **2013**, 8, e78195	3.7	6

129	Resistance patterns associated with HCV NS5A inhibitors provide limited insight into drug binding. **2014**, 6, 4227-41		30
128	Fluoxetine a novel anti-hepatitis C virus agent via ROS-, JNK-, and PPARγ-dependent pathways. **2014**, 110, 158-67		18
127	Hepatitis C virus NS5A protein enhances gluconeogenesis through upregulation of Akt-/JNK-PEPCK signalling pathways. **2014**, 34, 1358-68		10
126	HCV NS5A co-operates with PKR in modulating HCV IRES-dependent translation. **2014**, 26, 113-22		8
125	Immunoreactivity assessment of hepatitis C virus NS3 protease and NS5A proteins expressed in TOPO cloning system. **2014**, 47, 282-91		4
124	The crystal structure of NS5A domain 1 from genotype 1a reveals new clues to the mechanism of action for dimeric HCV inhibitors. **2014**, 23, 723-34		80
123	Discovery and development of hepatitis C virus NS5A replication complex inhibitors. **2014**, 57, 1643-72		61
122	Structural disorder in viral proteins. **2014**, 114, 6880-911		133
121	Discovery of functionalized bisimidazoles bearing cyclic aliphatic-phenyl motifs as HCV NS5A inhibitors. **2014**, 24, 5731-5737		14
120	Potent bisimidazole-based HCV NS5A inhibitors bearing annulated tricyclic motifs. **2014**, 24, 5738-5742		4
119	Asymmetric binding to NS5A by daclatasvir (BMS-790052) and analogs suggests two novel modes of HCV inhibition. **2014**, 57, 10031-43		38
118	The intrinsic disorder status of the human hepatitis C virus proteome. **2014**, 10, 1345-63		52
117	A novel immuno-competitive capture mass spectrometry strategy for protein-protein interaction profiling reveals that LATS kinases regulate HCV replication through NS5A phosphorylation. **2014**, 13, 3040-8		13
116	Bioengineered vaults: self-assembling protein shell-lipophilic core nanoparticles for drug delivery. **2014**, 8, 7723-32		49
115	A unique phosphorylation-dependent eIF4E assembly on 40S ribosomes co-ordinated by hepatitis C virus protein NS5A that activates internal ribosome entry site translation. **2014**, 462, 291-302		7
114	Hepatitis C virus-induced hepatocyte cell death and protection by inhibition of apoptosis. *Journal of General Virology*, **2014**, 95, 2204-2215	4.9	22
113	Discovery of daclatasvir, a pan-genotypic hepatitis C virus NS5A replication complex inhibitor with potent clinical effect. **2014**, 57, 5057-71		77
112	Hepatitis C NS5A protein: two drug targets within the same protein with different mechanisms of resistance. **2014**, 8, 30-7		16

111	Approaches to hepatitis C treatment and cure using NS5A inhibitors. **2014**, 7, 41-56		45
110	Investigating genotype 1a HCV drug resistance in NS5A region via Bayesian inference. **2015**, 20, 484-490		
109	Viruses in cancer cell plasticity: the role of hepatitis C virus in hepatocellular carcinoma. **2015**, 19, A62-7		1
108	Hepatitis C. **2015**, 1904-1927.e9		4
107	Should NS5A inhibitors serve as the scaffold for all-oral anti-HCV combination therapies?. **2015**, 7, 11-20		2
106	In vitro and in vivo antiviral activity and resistance profile of ombitasvir, an inhibitor of hepatitis C virus NS5A. **2015**, 59, 979-87		116
105	Hepatitis C virus NS5A drives a PTEN-PI3K/Akt feedback loop to support cell survival. **2015**, 35, 1682-91		28
104	Identification of a duplicated V3 domain in NS5A associated with cirrhosis and hepatocellular carcinoma in HCV-1b patients. **2015**, 69, 203-9		4
103	Design and synthesis of imidazole N-H substituted amide prodrugs as inhibitors of hepatitis C virus replication. **2015**, 25, 3147-50		6
102	Downregulation of viral RNA translation by hepatitis C virus non-structural protein NS5A requires the poly(U/UC) sequence in the 3NUTR. *Journal of General Virology*, **2015**, 96, 2114-2121	4.9	12
101	Vinexin Interacts with Hepatitis C Virus NS5A, Modulating Its Hyperphosphorylation To Regulate Viral Propagation. **2015**, 89, 7385-400		5
100	Fast hepatitis C virus RNA elimination and NS5A redistribution by NS5A inhibitors studied by a multiplex assay approach. **2015**, 59, 3482-92		19
99	Resensitizing daclatasvir-resistant hepatitis C variants by allosteric modulation of NS5A. **2015**, 527, 245-8		37
98	Arginine 112 is involved in HCV translation modulation by NS5A domain I. **2015**, 465, 95-100		8
97	Critical role of Casein kinase 2 in hepatitis C NS5A-mediated inhibition of Kv2.1 K(+) channel function. **2015**, 609, 48-52		4
96	Hepatitis C virus NS5A: enigmatic but still promiscuous 10 years on!. *Journal of General Virology*, **2015**, 96, 727-738	4.9	108
95	Recent advances and future directions in the management of hepatitis C infections. **2015**, 145, 92-102		18
94	Efficacy and Safety of Daclatasvir in Hepatitis C: An Overview. **2016**, 4, 336-344		4

93	Genome-wide analysis for identification of adaptive diversification between hepatitis C virus subtypes 1a and 1b. **2016**, 62, 608-16	1
92	Synthesis of isotopically labeled daclatasvir for use in human clinical studies. **2016**, 59, 164-70	1
91	The Casein Kinase 2-Dependent Phosphorylation of NS5A Domain 3 from Hepatitis C Virus Followed by Time-Resolved NMR Spectroscopy. **2016**, 17, 328-33	4
90	Ankyrin Repeat Domain 1 is Up-regulated During Hepatitis C Virus Infection and Regulates Hepatitis C Virus Entry. **2016**, 6, 20819	12
89	The Combination of Grazoprevir, a Hepatitis C Virus (HCV) NS3/4A Protease Inhibitor, and Elbasvir, an HCV NS5A Inhibitor, Demonstrates a High Genetic Barrier to Resistance in HCV Genotype 1a Replicons. **2016**, 60, 2954-64	48
88	Preclinical Profile and Clinical Efficacy of a Novel Hepatitis C Virus NS5A Inhibitor, EDP-239. **2016**, 60, 6207-15	3
87	2015 Philip S. Portoghese Medicinal Chemistry Lectureship. Curing Hepatitis C Virus Infection with Direct-Acting Antiviral Agents: The Arc of a Medicinal Chemistry Triumph. **2016**, 59, 7311-51	29
86	Discovery of ravidasvir (PPI-668) as a potent pan-genotypic HCV NS5A inhibitor. **2016**, 26, 4508-4512	13
85	HCV NS5A replication complex inhibitors. **2016**, 30, 151-157	14
84	Hepatitis C virus NS5A protein interacts with lysine methyltransferase SET and MYND domain-containing 3 and induces activator protein 1 activation. **2016**, 60, 407-17	6
83	Emerging roles of interferon-stimulated genes in the innate immune response to hepatitis C virus infection. **2016**, 13, 11-35	66
82	Exploring the importance of zinc binding and steric/hydrophobic factors in novel HCV replication inhibitors. **2016**, 26, 1196-9	3
81	Daclatasvir-containing all-oral regimens for the treatment of hepatitis C virus infection. **2016**, 10, 258-66	7
80	Antiviral Activity and Resistance Profile of the Next-Generation Hepatitis C Virus NS5A Inhibitor Pibrentasvir. **2017**, 61,	96
79	Action and function of Wnt/β-catenin signaling in the progression from chronic hepatitis C to hepatocellular carcinoma. **2017**, 52, 419-431	40
78	NS5A inhibitors for the treatment of hepatitis C infection. **2017**, 24, 180-186	20
77	Unconjugated interferon-stimulated gene 15 specifically interacts with the hepatitis C virus NS5A protein via domain I. **2017**, 61, 287-292	5
76	Human single chain-transbodies that bound to domain-I of non-structural protein 5A (NS5A) of hepatitis C virus. **2017**, 7, 15042	8

75	Hepatitis C Virus NS5A Targets Nucleosome Assembly Protein NAP1L1 To Control the Innate Cellular Response. **2017**, 91,	14
74	Hepatitis C Virus Treatment. **2017**,	
73	Resistance-Associated Variants in the NS5A Region of HCV and Methods for the Detection. **2017**, 25-32	
72	Epigenetics of Virus-Induced Tumors: Perspectives for Therapeutic Targeting. **2017**, 23, 4842-4861	2
71	Retinoid BMS411 (4-{[(5,5-dimethyl-8-phenyl-5,6-dihydronaphthalen-2-yl) carbonyl] amino} benzoic acid), a potential inhibitor of NS5A protein of hepatitis C virus, a candidate for combined therapy of hepatitis C infection. **2017**, 61, 204-211	1
70	Cellular and molecular targets for the immunotherapy of hepatocellular carcinoma. **2018**, 437, 13-36	27
69	Dual inhibitors of hepatitis C virus and hepatocellular carcinoma: design, synthesis and docking studies. **2018**, 4, FSO252	6
68	Safety and efficacy of elbasvir/grazoprevir for the treatment of chronic hepatitis C: current evidence. **2018**, 12, 2749-2756	4
67	HCV adaptation to HIV coinfection. **2018**, 65, 216-225	1
66	Flaviviridae virus nonstructural proteins 5 and 5A mediate viral immune evasion and are promising targets in drug development. **2018**, 190, 1-14	7
65	NS5A as a Target for HCV Drug Discovery. **2019**, 3-25	1
64	Wnt/Catenin Signaling in Liver Cancers. **2019**, 11,	58
63	The Discovery of Velpatasvir (GS-5816): The Potent Pan-Genotypic Once-Daily Oral HCV NS5A Inhibitor in the Single-Tablet Regimens Epclusa and Vosevi . **2019**, 81-110	
62	Modulation of calcium signaling pathway by hepatitis C virus core protein stimulates NLRP3 inflammasome activation. **2019**, 15, e1007593	46
61	Bayesian analysis of complex mutations in HBV, HCV, and HIV studies. **2019**, 2, 145-158	7
60	Hepatitis C Virus Non-Structural Protein 5A (NS5A) Disrupts Mitochondrial Dynamics and Induces Mitophagy. **2019**, 8,	29
59	Pathogenicity and Drug Resistance of Human Pathogens. **2019**,	1
58	The Discovery and Development of Daclatasvir: An Inhibitor of the Hepatitis C Virus NS5A Replication Complex. **2019**, 27-55	1

57	Nonconjugated Hydrocarbons as Rigid-Linear Motifs: Isosteres for Material Sciences and Bioorganic and Medicinal Chemistry. **2019**, 25, 4590-4647		95
56	Evolution of efficacious pangenotypic hepatitis C virus therapies. **2019**, 39, 1091-1136		10
55	Intrinsically disordered proteins of viruses: Involvement in the mechanism of cell regulation and pathogenesis. **2020**, 174, 1-78		22
54	The Hepatitis C virus NS5A and core proteins exert antagonistic effects on HAMP gene expression: the hidden interplay with the MTF-1/MRE pathway. **2021**, 11, 237-250		0
53	HCV Virology. **2021**, 1-44		
52	To Explore the Potential Targets and Current Structure-based Design Strategies Utilizing Co-crystallized Ligand to Combat HCV. **2021**, 22, 590-604		1
51	Genetic Determinants in a Critical Domain of NS5A Correlate with Hepatocellular Carcinoma in Cirrhotic Patients Infected with HCV Genotype 1b. **2021**, 13,		0
50	Additional Inhibition of Wnt/Catenin Signaling by Metformin in DAA Treatments as a Novel Therapeutic Strategy for HCV-Infected Patients. **2021**, 10,		0
49	Determination and structural characterization of ravidasvir metabolites by LC coupled to triple quadrupole linear ion trap MS: Application to pharmacokinetics and phase I metabolism in rats. **2021**, 35, e5146		1
48	Role of ORF4 in Hepatitis E virus regulation: analysis of intrinsically disordered regions. 1		2
47	The Discovery of Conformationally Constrained Bicyclic Peptidomimetics as Potent Hepatitis C NS5A Inhibitors. **2021**, 12, 1649-1655		1
46	Interferon-Induced Effector Proteins and Hepatitis C Virus Replication. **2008**, 106-129		1
45	Direct-Acting Antiviral Agents for the Treatment of Hepatitis C Virus Infection. **2017**, 553-627		0
44	Hepatitis C. **2010**, 2157-2185		4
43	Replication of Hepatitis C Virus. **2012**, 97-110		1
42	Hepatitis C virus NS5A protein interacts with beta-catenin and stimulates its transcriptional activity in a phosphoinositide-3 kinase-dependent fashion. *Journal of General Virology*, **2010**, 91, 373-81	4.9	40
41	p53 controls hepatitis C virus non-structural protein 5A-mediated downregulation of GADD45 expression via the NF-B and PI3K-Akt pathways. *Journal of General Virology*, **2013**, 94, 326-335	4.9	18
40	Discovery of SARS-CoV-2 antiviral synergy between remdesivir and approved drugs in human lung cells.		10

39	Characterization of a peptide domain within the GB virus C NS5A phosphoprotein that inhibits HIV replication. *PLoS ONE*, **2008**, 3, e2580	3.7	23
38	Sequence heterogeneity in NS5A of hepatitis C virus genotypes 2a and 2b and clinical outcome of pegylated-interferon/ribavirin therapy. *PLoS ONE*, **2012**, 7, e30513	3.7	16
37	Direct binding of ledipasvir to HCV NS5A: mechanism of resistance to an HCV antiviral agent. *PLoS ONE*, **2015**, 10, e0122844	3.7	31
36	Natural non-homologous recombination led to the emergence of a duplicated V3-NS5A region in HCV-1b strains associated with hepatocellular carcinoma. *PLoS ONE*, **2017**, 12, e0174651	3.7	1
35	Genetic diversity of the hepatitis C virus: impact and issues in the antiviral therapy. *World Journal of Gastroenterology*, **2007**, 13, 2416-26	5.6	72
34	Hepatitis C virus non-structural 5A abrogates signal transducer and activator of transcription-1 nuclear translocation induced by IFN-alpha through dephosphorylation. *World Journal of Gastroenterology*, **2007**, 13, 4080-4	5.6	12
33	Interaction of hepatitis C virus with the type I interferon system. *World Journal of Gastroenterology*, **2007**, 13, 4818-23	5.6	8
32	Hepatitis C virus infection and apoptosis. *World Journal of Gastroenterology*, **2007**, 13, 4865-72	5.6	104
31	Post-translational modifications of hepatitis C viral proteins and their biological significance. *World Journal of Gastroenterology*, **2013**, 19, 8929-39	5.6	23
30	Hepatitis C virus NS5A inhibitors and drug resistance mutations. *World Journal of Gastroenterology*, **2014**, 20, 2902-12	5.6	104
29	Understanding the interaction of hepatitis C virus with host DEAD-box RNA helicases. *World Journal of Gastroenterology*, **2014**, 20, 2913-26	5.6	23
28	Impact of hepatitis C virus heterogeneity on interferon sensitivity: an overview. *World Journal of Gastroenterology*, **2014**, 20, 7555-69	5.6	34
27	Viral proteins and Src family kinases: Mechanisms of pathogenicity from a "liaison dangereuse". *World Journal of Virology*, **2013**, 2, 71-8	6.9	22
26	Role of "dual-personality" fragments in HEV adaptation-analysis of Y-domain region. *Journal of Genetic Engineering and Biotechnology*, **2021**, 19, 154	3.1	1
25	Molecular Pathogenesis of Hepatocellular Carcinoma. **2006**, 165-175		
24	Hepatitis C Virus.		
23	HEPATITIS C VIRUS. **2009**, 2380-2394		
22	Hepatitis C Virus.		

21	Discovering Relationship between Hepatitis C Virus NS5A Protein and Interferon/Ribavirin Therapy. *Lecture Notes in Computer Science*, **2011**, 79-90	0.9	
20	Mutations and the Development of Anti-viral Resistance. **2012**, 227-249		
19	Overview of Hepatitis Viruses and Cancer. **2012**, 509-529		
18	Regulation of Innate Immunity by the Flaviviridae. 317-333		
17	. **2015**, 1,		
16	Hepatitis C Virus Infection. 1939-1957		
15	HCV Drug Resistance. **2017**, 579-609		
14	A new method of producing NS5A antigen of hepatitis C virus. *Voprosy Virusologii*, **2017**, 62, 17-25		
13	Hepatitis C Virus and Innate Interferon Response: Pathogen Biology, Drug Resistance, Novel Drug Targets, and Therapeutic Strategies. **2019**, 233-249		
12	Prognostic value and underlying mechanism of KIAA0101 in hepatocellular carcinoma: database mining and co-expression analysis. *Aging*, **2020**, 12, 16420-16436	5.6	3
11	Apoptosis in the Liver. **2009**, 73-91		
10	The characteristics of rare codon clusters in the genome and proteins of hepatitis C virus; a bioinformatics look. *Middle East Journal of Digestive Diseases*, **2014**, 6, 214-27	1.1	8
9	Analyzing the Effects of Pretreatment Diversity on HCV Drug Treatment Responsiveness Using Bayesian Partition methods. **2015**, 1, 1-6		
8	Paronychia Associated with Ledipasvir/Sofosbuvir for Hepatitis C Treatment. *Journal of Clinical and Aesthetic Dermatology*, **2019**, 12, 35-37	1.2	
7	The dark proteome of rodent hepatitis E virus: Analysis of intrinsically disordered regions. *Archives of Hepatitis Research*, **2022**, 8, 005-011	0.2	0
6	Hepatitis C Virus Nonstructural 5A Protein Interacts with Telomere Length Regulation Protein: Implications for Telomere Shortening in Patients Infected with HCV.. *Molecules and Cells*, **2021**,	3.5	0
5	Dynamics of Apoptotic Activity during Antiviral Treatment of Patients with Chronic Hepatitis C. *Antiviral Therapy*, **2007**, 12, 779-787	1.6	6
4	A simple and sensitive HPLC-FL method for bioanalysis of velpatasvir, a novel hepatitis C virus NS5A inhibitor, in rat plasma: Investigation of factors determining its oral bioavailability. *Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences*, **2022**, 123399	3.2	0

3	Integrated analysis to study the interplay between post-translational modifications (PTM) in hepatitis C virus proteins and hepatocellular carcinoma (HCC) development. **2022**, 12,	1
2	Discovery of SARS-CoV-2 antiviral synergy between remdesivir and approved drugs in human lung cells. **2022**, 12,	0
1	WNT/Ecatenin signaling in hepatocellular carcinoma: The aberrant activation, pathogenic roles, and therapeutic opportunities. **2023**,	0