

## Manal Hamdy El-Sayed



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## Professional Summary

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*Professor of Pediatric Medicine and Director of the Clinical Research Center, Faculty of Medicine, Ain Shams University (MASRI-CRC), Cairo. A founding member of the Egyptian National Committee for Control of Viral Hepatitis affiliated to the Egyptian Ministry of Health. Secretary general of the Egyptian Liver Care Society, an NGO supporting liver transplant recipients and treatment of children with viral hepatitis. Board member of the European Study of Liver Disease International Liver Foundation (EILF) and oversight committee of the global EndHep2030 initiative.*

## Education

School/College/University/Other	Degree obtained	Date
English School, Cairo, Egypt	GCE (Cambridge)	1979
Faculty of Medicine, Ain Shams University, Cairo, Egypt	MBBCh (Bachelor in Medicine and Surgery)	1985
Faculty of Medicine, Ain Shams University, Cairo, Egypt.	MSc (Master degree) in Pediatrics	1989
Faculty of Medicine, Ain Shams University, Cairo, Egypt	MD (Doctorate degree; DPM) in Pediatrics	1993

## Honors:

- Distinction in Pathology, Toxicology, Pediatrics and Internal Medicine 1985
- Highest honors, ranked first, in MBBCh-1985
- Highest honors, ranked first, in MSc-1989
- Highest honors, ranked first, in MD-1993

## Clinical Training:

Training attended/Technical skills	Place	Dates (from-to)
House officer (Rotational Intern)	Ain Shams University Hospitals	1986-1987
Resident Physician, Children's Hospital	Ain Shams University Hospitals	1987- 1990

Research Fellow (Hon.  
Assistant Lecturer), Department  
of Pediatrics

Ain Shams University  
Hospitals

June- Dec. 1990

## Fields of Interest:

- Viral Hepatitis and Liver disease in children particularly in the immunocompromised population (multi-transfused and those undergoing cancer chemotherapy)
- Strategy development for prevention and control of viral hepatitis and implementation of micro and macro-elimination models of viral hepatitis in adults and children (national and global)

## Employment History:

Assistant Lecturer,  
Department of Pediatrics

Ain Shams University

1991-1993

Lecturer,  
Department of Pediatrics,

Ain Shams University

1993-1998

Assistant Professor,  
Department of Pediatrics

Ain Shams University

1998-2003

Professor of Pediatrics,  
Department of Pediatrics

Ain Shams University

July 2003-present

## Grants/ Awards:

### 1995- 1999:

Egyptian Ministry of International Cooperation grant for molecular study of HCV in Egyptian children (**Co-principal Investigator**).

### 1998- 1999:

Netherlands Embassy in Cairo grant for pattern of acquisition of HCV in infants (**Principal Investigator**).

### 1999- 2001:

Clinical trial sponsored by Glaxo-SK (UK) for compassionate use of **lamivudine** in children with chronic HBV and undergoing chemotherapy for hematological malignancies (**Principal Investigator**).

### 2000-2002:

University of Amsterdam grant for mother to infant transmission of HCV infection (**Principal Investigator**).

### 2001-2007:

A pilot study of **lamivudine** treatment in HBsAg and/or HBcAb seropositive pediatric cancer patients, including bone marrow transplantation, undergoing cytotoxic chemotherapy. Sponsored by Glaxo-SK (UK) (**Principal Investigator**).

### 2005:

Innogenetics-Viral Hepatitis Laboratories-Brussels grant for HCV genotyping and subtyping in children with hematological diseases. 2010-2012 (**Principal Investigator**)

### 2010-2013:

Occult Hepatitis B in Egyptian Blood Donors (Eastern Mediterranean Regional Office-EMRO- of World Health Organisation grant) (**Co-principal Investigator**).

### 2019-2021:

**HCV-ENHANCE** for elimination of HCV in antenatal care in Egypt: UK (UCL) and Egypt (Ain Shams University, Assiut University, Menoufia Liver Institute and Tanta University) (**Principal Investigator**).

Trial to cure hepatitis C virus (**HCV**) in HCV-infected pregnant women And prevent VERTical HCV transmission (**HCVAVERT**) Ukraine, Egypt (PI), UK, France, USA, South East Asia.

### Scientific Award in 2003-2004:

Received the scientific award of the Ministry of Higher Education for the year 2003-2004 for the outstanding scientific research achievements in the field of Pediatric Hematology/Oncology particularly pertaining to viral hepatitis in multitransfused and cancer children.

### Principal Investigator in Investigator Initiated Trials (distinctive trials in children and adolescents)

- 1- Efficacy and Safety of Ledipasvir/Sofosbuvir Fixed Dose Combination in the Treatment of Hepatitis C Virus (HCV) Infection in Pediatric Participants Undergoing Cancer Chemotherapy (Egypt Peds) (trial ended February 2019, data under analysis, will expand recommendations of treatment). **ClinicalTrials.gov Identifier: NCT02868242.**
- 2- Clinical Pharmacokinetics of Daclatasvir/Sofosbuvir in Adolescents with Hepatitis C Virus (ended May 2019, data under analysis, will inform WHO guidelines for treatment of children in resource-limited settings with a pangenotypic combination). **ClinicalTrials.gov Identifier: NCT03540212.**
- 3- The Potential Hepatoprotective Effect of Metformin in Patients with Beta Thalassemia Major. **ClinicalTrials.gov Identifier: NCT02984475**

### Other Appointments:

- Consultant at the *National Cancer Institute* for “*Pediatric Liver Disease*” running a 600 patients’ liver clinic since September 2000.
- Consultant Hepatologist at the 57357 Children’s Cancer Hospital since July 2012.

Established the first specialized clinics for management of liver disease in cancer patients and developed a program for management of Liver disease in children with hematological diseases and malignancies in four institutes namely, Ain Shams University, National Cancer Institute

- Founding member of the “**Egyptian National Committee for Control of Viral Hepatitis**” assigned by the Health Minister to develop and implement a plan for Control and management of Viral Hepatitis in Egypt since 2006.
- Clinical Director of the National HCV treatment program in children since 2010
- Secretary general of the “**Egyptian Liver Care Society**” since 2008 (an NGO supporting cost of liver transplantation and treatment of children with hepatitis C as well as equipment for Liver disease centers)
- Appointed Director of the “**Clinical Research Center**” at the Faculty of Medicine Ain Shams University (MASRI-CRC) since December 2015

Established the first Clinical Research Center at Ain Shams University, the second center to receive national accreditation in Egypt, attracting national and international clinical trials with 5 international and 3 investigator initiated trials running, signed agreements with global clinical research organisations. Uniquely poised to be a WHO collaborating center due to personal

- Board member of the *European Association for Study of Liver Disease International Liver Foundation (EASL-ILF; Geneva)* since January 2018 (<https://easl-ilf.org/about-ilf/>).
- Oversight Committee of **EndHep2030** initiative (San Francisco, CA-US) since January 2019 (<https://endhep2030.org/endhep2030-leadership/>)

### Relevant Publications:

1. Khalifa, AS, Mitchell, BS, Watts, DM, El-Samahy, MH, **El-Sayed, MH**, Hassan, NF, Jennigs, G B, Hibbs, RG and Corwin, AL (1993): Prevalence of hepatitis C viral antibody in transfused and nontransfused Egyptian children. *Am J Trop Med Hyg*; 49(3):316.
2. Khalifa, AS, Salem, MAK, El-Samahy, MH, El-Alfy, MS, Tantawy, AAG, **El-Sayed, M H, et al.**, (1997): Evaluation of the efficacy of hepatitis B vaccine in high risk children. *Egypt J Pediatr*; 14(4):595.
3. Khalifa, AS, Kamel, MAW, Kamar, ZA, Abd El-Ghaffar, TY, Moselhy, SS, El-Habashy, SA, **El-Sayed, MH**

(1998): Alpha Interferon in the treatment of chronic hepatitis C infection in  $\beta$ -thalassemia patients. Egypt.J.Pediatr.; 15(4):491.

4. **El-Sayed, MH**, Mostafa, AO, Mohamed, MM, Rady, MS, Karim, AM and Khalifa, AS, (1998): Hepatitis C virus infection in Egyptian pediatric patients with hematological malignancies. 5<sup>th</sup> international meeting on Hepatitis C Virus and related viruses molecular virology and pathogenesis. June 25-28; Venice, Italy M53:p348(abstr.)
5. **El-Sayed, MH**, El-Tawil A, Karim AM. Severity of liver disease in HCV infected children undergoing cancer chemotherapy. 8<sup>th</sup> International meeting on Hepatitis C Virus and related viruses (molecular virology and pathogenesis). Sept 2-5; Paris, France, P-323:299(abstr.).
6. **El-Sayed, MH**, Khalifa AS, Mostafa, AO, Mohamed, MM, Rady, MS, Salama II, Karim, AM, (2001): Predictors of hepatitis C virus infection in children with hematological diseases and their care providers. 8<sup>th</sup> International meeting on Hepatitis C Virus and related viruses (molecular virology and pathogenesis). Sept 2-5; Paris, France, P-295:280 (abstr.).
7. Khalifa AS, **El-Sayed, MH**, Mostafa, AO, Mohamed, MM, Rady, MS, Salama II, Karim, AM. (2002): Hepatitis C virus infection in children with hematological diseases: Risk factors and reliability of diagnostic assays. Egypt J Pediatr; 19(2):293-308.
8. **El-Sayed, M.H.**, El-Haddad A, Fahmy O, Salama I, Mahmoud H. (2002): Liver disease is a major cause of mortality following allogeneic bone marrow transplantation. J Hepatology; 36 Suppl.1:13(36A).
9. **El-Sayed, M.H.**, El-Haddad A, Mahmoud H. (2003): Management of HCV infection in children scheduled for allogeneic bone marrow transplantation. J Hepatology; 38 Suppl 1.
10. **El-Sayed MH**, Mohamed MM, Karim A, Maina AM, Oliveri F, Brunetto MR, Bonino F (2003): Severe liver disease is caused by HBV rather than HCV in children with hematological malignancies. Hematol J.;4:321-7.
11. **El-Sayed, M.H.** (2003): Management of hepatitis B and C in children undergoing chemotherapy and bone marrow transplantation (*key note lecture*). 35<sup>th</sup> meeting of I international Society of Pediatric Oncology (SIOP), October 8-11, 2003.
12. El-Alfy MS, **El-Sayed MH** (2004): Overwhelming post-splenectomy infection: is quality of patient knowledge enough for prevention? Hematol J;5(1):77-80.
13. **El-Sayed, M.H.**, El-Haddad A, Abdel-Kadir I, Mahmoud H. (2004): Impact of preemptive therapy of HCV and HBV on occurrence of hepatic complications following bone marrow transplantation (BMT). J Hepatology; 40 Suppl 1:140(474A).
14. **El-Sayed MH**, Shanab G., Karim A, Black A, Dixon JS (2004): Lamivudine facilitates optimal chemotherapy in children with hematological malignancies and chronic HBV (CHB): A preliminary report. Pediatr Hematol Oncol ;21 (2):145-157.
15. Zekri AR, Mohamed WS, Samra MA, Sherif GM, El-Shehaby AM, **El-Sayed MH**.(2004): risk factors for cytomegalovirus, hepatitis B and C virus reactivation after bone marrow transplantation. Transpl Immunol; 13(4):305-11.
16. **El-Sayed, M.H.**, El-Haddad A, Fahmy O, Salama I, Mahmoud H. (2004): Liver disease is a major cause of mortality following allogeneic bone marrow transplantation. Eur J Gastroenterol Hepatol 16(12):1347-54.
17. **El-Sayed, MH** (2004) Hepatitis virus infection in immunocompromised children. *Seminars in Viral Liver Diseases*. Clinical Management of the Patient with Chronic Hepatitis C. Beyond the Guide Lines. Pisa, November 25-26, 2004.
18. Tarek M.A. El-Gandour, Mohammad A. Sakr, Hatem El-Sebai, Tarek F El-Gammal and **El-Sayed MH** (2006) Necrolytic Acral Erythema in Egyptian Patients with HCV infection. J Gastroenterol Hepatol 21:1200-1206.
19. **El-Sayed MH**, Abdel-Moneim A, El-Tawil M, Azer E (2006). Knowledge and practice towards viral hepatitis among care-providers of multi-transfused patients. Liver Intern 26(Supp 1):P-292; 102.
20. **El-Sayed MH**, Abdel-Gawad A, Abdel-Maksoud A, Madkour M, Zaki M, El-Tawil A, Salem M (2006): Liver disease is an important cause of morbidity in type-1 diabetes. Liver Intern 26(Supp 1):P-302; 105.
21. **El-Sayed MH**, El-Beblawy N, Hawas K, Abdel-Aziz M. Anti-cardiolipin, anti-beta2 glycoprotein-1 antibodies and HCV in hematological diseases: do they have clinical consequences? (2006): Liver Intern 26(Supp 1):P-313; 108.
22. Hofstede F, **El-Sayed MH**, Salem M, Karim A, Kuijpers TW. Vertical transmission of HCV in Egypt (2006): Liver Intern 26(Supp 1):P-327; 112.

23. El-Alfy MS, Abdin I, Shehab Z, Hussein O, **El-Sayed MH**. Liver iron load and HCV in patients with Beta-thalassemia major: Impact of chelation therapy on severity of liver disease (2007): J Hepatol 36 (Supp 1):P534-S203.
24. **El-Sayed MH**, El-Haddad A, Ahmed I, El-Mahalawy H, Chen X. Decreased risk of Liver GVHD and GVHD-related mortality following allo-BMT in children receiving preemptive therapy for HBV or HCV (2007): J Hepatol; 36 (Suppl 1):P585:S222.
25. Zekri AR, Hafez MM, Mohamed NI, Hassan ZK, **El-Sayed MH**, Khaled MM, Mansour T (2007): Hepatitis B virus (HBV) genotypes in Egyptian pediatric cancer patients with acute and chronic active HBV infection. Virol J 15;4:74.
26. El Beshlawy A, Mokhtar G, Abd El Ghafar E, Abd El Dayem SM, **El Sayed MH**, Aly AA, Farok M. (2008): Assessment of puberty in relation to L-carnitine and hormonal replacement therapy in beta-thalassemic patients. J Trop Pediatr ;54(6):375-81.
27. Said ZN, **El-Sayed MH**, El-Bishbishi IA, El-Fouhil DF, Abdel-Rheem SE, El-Abedin MZ, Salama II (2009): High prevalence of occult hepatitis B in hepatitis C-infected Egyptian children with haematological disorders and malignancies. Liver Int; 29(4):518-24.
28. **El-Sayed MH**, Mohamed MK, Arafa NA, El-Feky MG (2010): Intra-familial transmission of hepatitis B and C among families of multi-transfused Egyptian children. The Egyptian Journal of Community Medicine;28(3):53-67.
29. Al-Ofairi BA, Barakat AB, Ghanim Hel-D, Shehata IH, **El-Sayed MH** (2011): A study of innate and adaptive immune responses in beta-thalassemic patients with chronic hepatitis C virus infection. Egypt J Immunol; 18(1):61-76.
30. Abdel-Aziz DH, Sabry NA, **El-Sayed MH**, El-Gazayerly ON (2011): Efficacy and safety of pegylated interferon in children and adolescents infected with chronic hepatitis C: a preliminary study. J Pharm Pract; 24(2):203-10.
31. **El-Sayed MH**, Nasr E, Zekri A, El-Beblawy N, Abdel Aziz AO, Zalata KR, Delgado-Borrego A, El-Haddad A (2011): Factors Associated with Fibrosis Among HCV Infected Children and Adolescents Receiving Cancer Chemotherapy. Hepatology; 54, S1:715.
32. Specialist Panel on Chronic Hepatitis B in the Middle East (2012): A review of chronic hepatitis B epidemiology and management issues in selected countries in the Middle East. J Viral Hepat; 19(1):9-22.
33. Mohammed Saif M, Farid SF, Khaleel SA, Sabry NA, **El-Sayed MH** (2012): Hepato-protective efficacy of ursodeoxycholic acid in pediatrics acute lymphoblastic leukemia. Pediatr Hematol Oncol; 29(7):627-32.
34. **El-Sayed MH**, Andrawes NG, El-Haddad A, Naguib N (2012): Liver disease outcome in hepatitis B and hepatitis C virus co-infected children and adolescents under immunosuppressive therapy. Egyptian J of Pediatr; 28(1):149-165.
35. Andrawes NG, Kamal El Deen FM, Shawki NA, **El-Sayed MH** (2012): Serum hepatic transaminases and ferritin in Egyptian patients with B-thalassemia. Egyptian J of Pediatr; 29(2): 195-208.
36. Breban R, Doss W, Esmat G, **El-Sayed M**, Hellard M, Ayscue P, Albert M, Fontanet A, Mohamed MK. (2013): (short report) Towards realistic estimates of HCV incidence in Egypt. J Viral Hepat; 20(4):294-6.
37. Progress toward prevention and control of hepatitis C Virus infection -Egypt, 2001-2012 (2012): Morbidity and Mortality Weekly Report (MMWR). July 27, 2012 / 61(29):545-549.
38. Al-Ofairi BA, **El-Sayed MH**, Al-Ghanem HA, Barakat AB, Shehata IH (2013): Cellular adaptive immune status in Egyptian thalassemic patients with chronic hepatitis C virus infection. J Clin Exp Hepatol; 3 (1), Suppl:S62.
39. **El-Sayed MH**, Ibrahim D, Omar W, Zalata K, El-Haddad A (2013): Role of liver biopsy in assessment of liver dysfunction in HCV-infected children following hematopoietic bone marrow transplantation. J Hepatol; 58 (S1):P1388-S558.
40. Breban R, Doss W, Esmat G, **Elsayed M**, Hellard M, Ayscue P, Albert M, Fontanet A, Mohamed MK. Quantifying current hepatitis C virus incidence in Egypt - Response to letter by Miller and Abu-Raddad. J Viral Hepat. 2013 Sep;20(9):668. doi: 10.1111/jvh.12092.
41. Said ZN, **El-Sayed MH**, Salama II, Aboel-Magd EK, Mahmoud MH, El-Setouhy M, Mouftah F, Azzab MB, Goubran H, Bassili A, Esmat G (2013): Occult hepatitis B infection among Egyptian blood donors. World J Hepatol; 27;5(2):64-73.

42. **El-Sayed MH**, Matar RM, Abdel-Gawad AN, Abdel-Aziz MM, Esmat GE, Mokhtar GM (2013): Hepcidin and Iron Overload in HCV-infected Children with Acute Leukemia.. *Hepatology*; 58 (S1): P1226-806A.
43. Wedemeyer H, Duberg AS, Buti M, Rosenberg WM, Frankova S, Esmat G, Örmeci N, Van Vlierberghe H, Gschwantler M, Akarca U, Aleman S, Balık I, Berg T, Bihl F, Bilodeau M, Blasco AJ, Brandão Mello CE, Bruggmann P, Calinas F, Calleja JL, Cheinquer H, Christensen PB, Clausen M, Coelho HS, Cornberg M, Cramp ME, Dore GJ, Doss W, **El-Sayed MH**, Ergör G, Estes C, Falconer K, Félix J, Ferraz ML, Ferreira PR, García-Samaniego J, Gerstoft J, Gira JA, Gonçalves FL Jr, Guimarães Pessôa M, Hézode C, Hindman SJ, Hofer H, Husa P, Idilman R, Kåberg M, Kaita KD, Kautz A, Kaymakoglu S, Kraiden M, Krarup H, Laleman W, Lavanchy D, Lázaro P, Marinho RT, Marotta P, Mauss S, Mendes Correa MC, Moreno C, Müllhaupt B, Myers RP, Nemecek V, Øvrehus AL, Parkes J, Peltekian KM, Ramji A, Razavi H, Reis N, Roberts SK, Roudot-Thoraval F, Ryder SD, Sarmento-Castro R, Sarrazin C, Semela D, Sherman M, Shiha GE, Sperl J, Stärkel P, Stauber RE, Thompson AJ, Urbanek P, Van Damme P, van Thiel I, Vandijck D, Vogel W, Waked I, Weis N, Wiegand J, Yosry A, Zekry A, Negro F, Sievert W, Gower E (2014): **Strategies to manage hepatitis C virus (HCV) disease burden**. *J Viral Hepat.*; 21 Suppl 1:60-89.
44. Bruggmann P, Berg T, Øvrehus AL, Moreno C, Brandão Mello CE, Roudot-Thoraval F, Marinho RT, Sherman M, Ryder SD, Sperl J, Akarca U, Balık I, Bihl F, Bilodeau M, Blasco AJ, Buti M, Calinas F, Calleja JL, Cheinquer H, Christensen PB, Clausen M, Coelho HS, Cornberg M, Cramp ME, Dore GJ, Doss W, Duberg AS, **El-Sayed MH**, Ergör G, Esmat G, Estes C, Falconer K, Félix J, Ferraz ML, Ferreira PR, Frankova S, García-Samaniego J, Gerstoft J, Gira JA, Gonçalves FL Jr, Gower E, Gschwantler M, Guimarães Pessôa M, Hézode C, Hofer H, Husa P, Idilman R, Kåberg M, Kaita KD, Kautz A, Kaymakoglu S, Kraiden M, Krarup H, Laleman W, Lavanchy D, Lázaro P, Marotta P, Mauss S, Mendes Correa MC, Müllhaupt B, Myers RP, Negro F, Nemecek V, Örmeci N, Parkes J, Peltekian KM, Ramji A, Razavi H, Reis N, Roberts SK, Rosenberg WM, Sarmento-Castro R, Sarrazin C, Semela D, Shiha GE, Sievert W, Stärkel P, Stauber RE, Thompson AJ, Urbanek P, van Thiel I, Van Vlierberghe H, Vandijck D, Vogel W, Waked I, Wedemeyer H, Weis N, Wiegand J, Yosry A, Zekry A, Van Damme P, Aleman S, Hindman SJ. (2014): **Historical epidemiology of hepatitis C virus (HCV) in selected countries**. *J Viral Hepat.*; 21 Suppl 1:5-33.
45. Waked I, Doss W, **El-Sayed MH**, Estes C, Razavi H, Shiha G, Yosry A, Esmat G (2014): The current and future disease burden of chronic hepatitis C virus infection in Egypt. *Arab J Gastroenterol.*; 15(2):45-52.
46. **El-Sayed MH**, Toaima D, Marzouk FA, Mohsen A, El-Sharkawy A, Esmat GE, El-Haddad A (2014): APRI, FIB-4 and Fibroscan in Prediction of Significant Fibrosis in Adolescent Cancer Survivors in a Resource Limited Country. *Hepatology*; 60 (S1): P681-530 A.
47. **El-Sayed MH**, Labib JH, Abdel-Hamid DH, Helaly HRA (2014): Detection of hepatitis C virus antibody in the saliva of children and adolescents with b-thalassemia. *The Egyptian Journal of Haematology*. 39 (4) 217-221.
48. Metwally A, Mohsen A, Saleh R, Foad W, Ibrahim N, Rabaah T, **El-Sayed M** (2014): Prioritizing High-Risk Practices and Exploring New Emerging Ones Associated With Hepatitis C Virus Infection in Egypt. *Iran J Public Health*. 43(10):1385-94.
49. Al-Tawil MM, Shoeeb AS, Abbas A, El-Tawil A, **El-Sayed MH**. (2015): Lipid profile and hepatic steatosis in hepatitis C infected Egyptian survivors of childhood cancer. *Pediatr Hematol Oncol.*; 32(1):70-7.
50. **El-Sayed MH**, Razavi H. Global estimate of HCV infection in the pediatric and adolescent population (2015). P1263. *J Hepatol*; 62:S831-S832.
51. Hamed AA, Darwish YW, **El-Sayed MH** (2015): ADAMTS13 Levels in Young Patients With  $\beta$ -Thalassemia Major: Relation to Hepatitis C Virus Infection, Liver Cirrhosis, and Iron Overload. *Clin Appl Thromb Hemost*. 21(6):527-32.
52. Salama II, Sami SM, Said ZNA, **El-Sayed MH**, El Etreby LA, Rabah TM, Elmosalami DM, Abdel Hamid AT, Salama SI, Abdel-Mohsen AM, Emam HM, Elserougy SM, Hassanain AI, Abd Alhalim NF, Shaaban FA, Hemeda SA, Ibrahim NA, Metwally AM (2015). Effectiveness of hepatitis B virus vaccination program in Egypt: Multicenter national project. *WJH*. 7(22):2418.
53. Abdelaziz DH, Elhosseiny NM, Khaleel SA, Sabry NA, Attia AS, **El-Sayed MH** (2016). Association Between Combined Presence of Hepatitis C Virus and Polymorphisms in Different Genes with Toxicities of Methotrexate and 6-Mercaptopurine in Children with Acute Lymphoblastic Leukemia. *Pediatr Blood Cancer*. 63(9):1539-45.
54. Etreby R, Elakel W, Said M, Elkassas M, Seif S, Elbaz T, El Raziky M, Abdel Rehim S, Zaky S, Fouad R, Gamal H, Abdo M, Korany M, Yosry A, El Serafy M, **El-Sayed MH**, ElShazly Y, Waked I, Doss W, Esmat G (2016). Real life Egyptian experience of efficacy and safety of Simeprevir\ Sofosbuvir therapy in 6211 chronic HCV genotype IV infected patients. *Liver Int*. Oct 6. doi: 10.1111/liv.13266.

55. Al-Ghobashy MA, Hassan SA, Abdelaziz DH, Elhosseiny NM, Sabry NA, Attia AS, **El-Sayed MH** (2016). Development and validation of LC-MS/MS assay for the simultaneous determination of methotrexate, 6-mercaptopurine and its active metabolite 6-thioguanine in plasma of children with acute lymphoblastic leukemia: Correlation with genetic polymorphism. *J Chromatogr B Analyt Technol Biomed Life Sci.* 2016 Dec 1;1038:88-94.
56. The Polaris Observatory Collaborators (2016). Global prevalence and genotype distribution of hepatitis C virus infection in 2015: a modelling study. *The Lancet Gastro & Hepatol* :161-176. doi10.1016/S2468-1253(16)30181-9.
57. El-Akel W, **El-Sayed MH**, El Kassas M, El-Serafy M, Khairy M, Elsaeed K, Kabil K, Hassany M, Shawky A, Yosry A, Shaker MK, ElShazly Y, Waked I, Esmat G, Doss W. (2017). National treatment programme of hepatitis C in Egypt: Hepatitis C virus model of care. *J Viral Hepat.* ;24(4):262-267.
58. Indolfi G, Thorne C, **El Sayed MH**, Giaquinto C, Gonzalez-Peralta RP (2017). The Challenge of Treating Children with Hepatitis C Virus Infection. *J Pediatr Gastroenterol Nutr*;64(6):851-854.
59. Elbaz T, Elserafy M, Elakel W, Mohey MA, Abdo M, Hassany M, Mehrez M, Abouelkhair M, Yosry A, Omar A, Waked I, **Elsayed MH**, Mahran Z, Elshazly Y, Elgarem N, Gaballa A, Doss W, Esmat G (2017). Serious Adverse Events with Sofosbuvir Combined with Interferon and Ribavirin: Real-Life Egyptian Experience. *J Interferon Cytokine Res*;37(8):348-353.
60. Polaris Observatory HCV Collaborators. Global prevalence and genotype distribution of hepatitis C virus infection in 2015: a modelling study (2017). *Lancet Gastroenterol Hepatol*; 2 (3): 161-176. doi: 10.1016/S2468-1253(16)30181-9.
61. Elsharkawy A, Raziky ME, Akel WE, Saeed KE, Eletreby R, Hassany M, **El-Sayed MH**, Kabil K, Ismail SA, El-Serafy M, Abdelaziz AO, Shaker MK, Yosry A, Doss W, Shazly YE, Esmat G, Waked I (2017). Planning and prioritizing direct acting antivirals treatment for HCV patients in countries with limited resources: lessons from the Egyptian experience. *J Hepatol*; S0168-8278(17)32478-9.
62. El-Khayat HR, Kamal EM, **El-Sayed MH**, El-Shabrawi M, Ayoub H, Rizk A, Maher M, El Sheemy RY, Fouad YM, Attia D (2018). The effectiveness and safety of ledipasvir plus sofosbuvir in adolescents with chronic hepatitis C virus genotype 4 infection: a real-world experience. *Aliment Pharmacol Ther*; 47(6);838-844.
63. Salama II, Sami SM, Said ZN, Salama SI, Rabah TM, Abdel-Latif GA, Elmosalami DM, Saleh RM, Abdel Mohsin AM, Metwally AM, Hassanin AI, Emam HM, Hemida SA, Elserougy SM, Shaaban FA, Fouad WA, Mohsen A, **El-Sayed MH** (2018). Early and long term anamnestic response to HBV booster dose among fully vaccinated Egyptian children during infancy. *Vaccine*; 5;36(15):2005-2011.
64. Polaris Observatory Collaborators. Global prevalence, treatment, and prevention of hepatitis B virus infection in 2016: a modelling study (2018). *Lancet Gastroenterol Hepatol*;3(6):383-403. doi: 10.1016/S2468-1253(18)30056-6.
65. **El-Sayed MH**, Ebeid FSES, Zekri AR, Massetto B, Kersey K, Osinusi A, Zhang F, Brainard D, Elsayed W, El-Haddad A (2018). Ledipasvir/Sofosbuvir for 12 weeks is safe and effective in adolescents with chronic hepatitis C virus infection and hematological malignancies undergoing chemotherapy. *J Hepatol*; 68, Supplement 1:S515.
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### Developed/Co-authored Strategies and Guidelines:

- 1- Doss W, Mohamed M, Esmat G, El Sayed M, Fontanet A, Cooper S, et al. Egyptian national control strategy for viral hepatitis 2008– 2012. Arab Republic of Egypt, Ministry of Health and Population, National Committee for the Control of Viral Hepatitis. 2008.
- 2- Plan of Action for the Prevention, Care & Treatment of Viral Hepatitis, Egypt 2014-2018. [http://www.emro.who.int/images/stories/egypt/VH\\_Plan\\_of\\_Action\\_FINAL\\_PRINT1.pdf?ua=1](http://www.emro.who.int/images/stories/egypt/VH_Plan_of_Action_FINAL_PRINT1.pdf?ua=1)

### 3- World Health Organisation Guideline Development Group (GDG):

- a. Guidelines for the screening, care and treatment of persons with hepatitis C infection, April 2014. [https://apps.who.int/iris/bitstream/handle/10665/111747/9789241548755\\_eng.pdf?sequence=1](https://apps.who.int/iris/bitstream/handle/10665/111747/9789241548755_eng.pdf?sequence=1).
- b. Guidelines for the Prevention, Care and Treatment of Persons with Chronic Hepatitis B Infection, March 2015. [https://apps.who.int/iris/bitstream/handle/10665/154590/9789241549059\\_eng.pdf](https://apps.who.int/iris/bitstream/handle/10665/154590/9789241549059_eng.pdf).
- c. Guidelines for the screening, care and treatment of persons with hepatitis C infection, updated version April 2016. [https://apps.who.int/iris/bitstream/handle/10665/205035/9789241549615\\_eng.pdf?sequence=1](https://apps.who.int/iris/bitstream/handle/10665/205035/9789241549615_eng.pdf?sequence=1).
- d. Guidelines on Hepatitis B and C testing Feb 2017. <https://apps.who.int/iris/bitstream/handle/10665/254621/9789241549981-eng.pdf?sequence=1>.
- e. Guidelines for the Care and Treatment of Persons Diagnosed with chronic hepatitis C virus infection July 2018. <https://apps.who.int/iris/bitstream/handle/10665/273174/9789241550345-eng.pdf?ua=1>
- f. Guidelines for Prevention of Mother to Child Transmission of Hepatitis B Virus: Guidelines on Antiviral Prophylaxis in Pregnancy July 2020. <https://apps.who.int/iris/bitstream/handle/10665/333391/9789240002708-eng.pdf?sequence=1&isAllowed=y>

## Published Newsletters:

- El-Sayed, M. *Treatment of Children and Adolescents is Essential to Fulfil the WHO Elimination Goals*. <https://easl-ilf.org/news/treatment-children-adolescents-essential-fulfil-whos-elimination-goals/>
- Doss W and El-Sayed MH. *The Road to Elimination of HCV in Egypt*. <https://easl-ilf.org/wp-content/uploads/2018/12/hcv-Egypt.pdf>
- El-Sayed MH. *Egypt's Program to Treat Expatriates with HCV*. [https://easl-ilf.org/wp-content/uploads/2019/03/El-Sayed-treatment-for-expats-Egypt\\_2jm.pdf](https://easl-ilf.org/wp-content/uploads/2019/03/El-Sayed-treatment-for-expats-Egypt_2jm.pdf)

## Faculty in International Conferences:

*Faculty speaker, co-organiser and co-chair in numerous national and international meetings*

- Faculty speaker in numerous national and international meetings
- Faculty Speaker in the “*HBV and immunosuppression*” symposium during the European Study of Liver Disease meeting (Milan, 2008).
- Faculty speaker and tutor in the 5<sup>th</sup> (2007), 6<sup>th</sup> (2008) and 7<sup>th</sup> (2009) *Asian Pacific Hepatitis B Academy*.
- Faculty speaker and tutor on “*Viral Hepatitis in Children*” (St-Petersburg-October 2011, Georgia-October 2012 (EASL endorsed symposium) and Belarus-March 2013)
- Faculty speaker at American Association for Study of Liver Disease meeting (San Francisco-November 2011) at Center for Disease Control session (*Global Status of Viral Hepatitis*)
- Faculty speaker in Montreal University (Viral Hepatitis Research of Canada)-*Current Status of Viral Hepatitis in Egypt* (October 2014).
- Faculty speaker at Treatment Action Group (TAG) meeting, “*Hepatitis C in Children*”, Sitges October 2013.
- Faculty speaker at Johns Hopkins University, School of Public Health, Baltimore, “*National Strategy for Control of Viral Hepatitis in Egypt*” November, 2013.
- Faculty speaker in Hepatitis C cure and Eradication meeting in Toronto, Canada, October 2014
- Faculty speaker at AASLD (*Viral Hepatitis Action Coalition meeting*), Boston, November, 2014.
- Faculty speaker at Penta-ID Investigator’s meeting, San Servolo, Venice, 7-10<sup>th</sup> May, 2015

- Faculty speaker and moderator at the “*Trilateral Symposium*” (WIPO/WTO/WHO), Geneva, October, 2015.
- Faculty speaker at the 2<sup>nd</sup> Hepatitis C cure and Eradication meeting in Vancouver, Canada, November 2015
- Faculty speaker at AASLD (*WHO session*), San Francisco, November 2015.
- Faculty speaker at HEP DART 2015, Maui, Hawaii, 6-10 December 2015
- Faculty speaker at CROI meeting, Boston, USA, February 2016
- Faculty speaker at 5th CSHACV (*Canadian network for HCV symposium*), Montreal, Canada, February 2016.
- Faculty speaker at EASL 2016, Barcelona, Spain, April 13th-17th, 2016. (*MSF-Prolifica-TAG workshop*)
- Faculty speaker, Hepatology Academy, Paris, April 29th-30th, 2016.
- Faculty speaker, Antiviral Therapy in Pediatrics - Rome 30th - 31st May 2016.
- Faculty speaker and co-organiser of the *International Viral Hepatitis Elimination meeting (IVHEM)*, Amsterdam, 2-3 December, 2016.
- Participant and speaker in PADO-3 (Pediatric ARV Drug Development) meeting, Geneva, December 6<sup>th</sup>, 2016.
- Faculty speaker at Penta-ID Investigator’s meeting, San Servolo, Venice, 27-30<sup>th</sup> April, 2017.
- Faculty speaker and co-organiser of the *International Viral Hepatitis Elimination meeting (IVHEM)*, Amsterdam, 17-18 November, 2017.
- Faculty speaker, HEP DART, Kona, Hawaii, 3-7 December 2017.
- Abstract Subcommittee and speaker and co-chair of “*HCV in children*” WHO session, Global Summit of Viral Hepatitis, Sao Paulo, Brazil, November, 2017
- Program committee and speaker for World Hepatitis Summit, Toronto, June 2018
- Co-Chair, co-organiser and faculty speaker, Conference of Liver Disease in Africa (Kenya, Sept 2018)
- Faculty and co-organiser of the *International Viral Hepatitis Elimination meeting (IVHEM)*, Amsterdam, 7-8 December, 2018
- Faculty speaker in ESPGHAN conference, Florence, Jan 31-Feb 02, 2019
- Faculty speaker at EASL 2019, Vienna, April 10<sup>th</sup>-14<sup>th</sup>, 2019 (EILF Africa session and WHO session)
- Faculty speaker in Penta-ID Investigator’s meeting, Baveno, Italy, 30<sup>th</sup> May- 1<sup>st</sup> June, 2019
- Co-chair, co-organiser and faculty speaker- COLDA (6-8<sup>th</sup> September 2019, Cairo)
- Faculty speaker at RCPE Gastroenterology meeting (Edinburgh 20<sup>th</sup> November 2019)
- Faculty speaker and co-organiser of IVHEM (22-23<sup>rd</sup> November, 2019, Amsterdam)
- Faculty speaker and co-organiser of HEP DART (8-12<sup>th</sup> December 2019, Kauai, Hawaii).
- Faculty speaker at INHSU Africa 2010 (17<sup>th</sup>-20<sup>th</sup> February 2020).
- Faculty speaker at WHO/EASL Webinar-COVID-19 and Liver Disease (14<sup>th</sup> May, 2020)
- Faculty speaker at World Hepatitis Alliance Webinar-World Hepatitis Day (28<sup>th</sup> July 2020).
- Co-chair, co-organiser and faculty speaker- virtual COLDA (10-12<sup>th</sup> September 2020, Senegal)
- Co-organiser and faculty speaker-virtual IVHEM (4-5<sup>th</sup> December 2020, Amsterdam)

## **Community Outreach:**

- Through the National Committee for Control of Viral Hepatitis, developed a national communication strategy for hepatitis awareness in collaboration with Johns Hopkins Communication for Health Living. Supervising and implementing the national awareness campaign and a Pediatric HCV treatment program.
- Development and implementation of the national “Stop Viral Hepatitis” University campaign including all universities with awareness and providing free vaccination to 30,000 students against HBV (2008-2010) (activities resumed Fall 2012) in collaboration with the civil society and private sector.

- Development and implementation of a Hepatitis C awareness and screening campaign at three Universities testing students and employees and linkage to care and treatment in collaboration with Ask Consult for Health, USAID and EFG Hermes Foundation.
- Clinical Director of the “*C Free Child*” program treating HCV-infected children in specialised Pediatric Liver Disease centers in 7 Governorates, University hospitals (funded through the Egyptian Liver Care Society, Sawiris Foundation and the CIB foundation) *since 2008*. The program is still running supporting the national program after introduction of treatment for children through the government program in 2019/2020.
- Supervised the active COVID-19 universal screening of more than 4000 health care providers at the faculty of Medicine Ain Shams University (March through May 2020).

### **Other Activities:**

- Visiting Professor, September 2005, Boston’s Children’s Hospital, Harvard University.
- Certified in Clinical Evidence Based Medicine (workshop training-Oxford University September 2012)
- Supervised and supervising numerous MSc, PhD and Doctorate degree theses in Pediatrics especially concerning transmission, natural history, co-morbid risk factors and management of HBV and/or HCV in children particularly in the immunocompromised population.
- Vice Chair of the *World Health Organisation (WHO) Technical Advisory Group (TAG)* for prevention and control of blood-borne viral hepatitis B and C developing a national action plan in collaboration with CDC-Atlanta, Pasteur Institute, National Committee for Control of Viral Hepatitis and Ministry of Health and Population (2013-2018).
- WHO’s strategic Think Tank board member charged with Global strategies for control of viral hepatitis 2020-2030.
- WHO consultant for strategy development of programs for control of viral hepatitis in India, July 2016, Kuwait, December 2016 and Morocco November 2018.
- Advisory board member, Perspectum Liver Multiscan 2016-2018.
- Board member of the Drug Development Advisory Committee for HCV (DRAG-HCV) April 2014-2016.
- Member of the WHO Global Accelerator for Pediatric Formulations (GAP-f) since December 2016.
- Member of the editorial board of Hepatology (American Association for Study of Liver Disease Journal)
- WHO Steering Committee for guidelines to Hepatitis A vaccination (2020/2021)
- Member of the WHO’s Pediatric Hepatitis Working Group since its foundation (September 2020)
- Governing board member, International Coalition for Elimination of Hepatitis B (ICE-HBV) (2021-2024)
- **Co-supervisor of the Presidential initiative for the National Hepatitis C Screening Program targeting >50 million of the adult population and supervisor and clinical director of the school children test and treatment program 2018-2020** (*so far ~50 million adults and ~9 million children have been screened and patients have been linked to care*).