

**McGill University Health Centre
Fellowship Program
Hepatology and Liver Transplantation**

1. Training Outline
2. Objectives
3. Weekly Schedules
4. Useful Contacts / Information
5. Reading Lists

1. Training Objectives

The 12 month fellowship program in hepatology and liver transplantation is designed to offer specialized training in all aspects of transplant and non-transplant hepatology with a view to preparing candidates for a career in Academic Hepatology.

The focus is clinical, but all candidates are expected to complete at least one research project during the course of their fellowship year. Furthermore, candidates will be expected to take on an increasing role in the education of peers with regards to the field of hepatology and liver transplantation, in preparation for a career in Academic medicine.

The following clinical components are included (all durations approximate and subject to change)

- a) Hepatology / Liver Transplant Consultation Service (3 periods)
- b) Hepatology Outpatient clinics (3 periods)
- c) Liver Transplant In-patient Service (1 period)
- d) Viral Hepatitis (1 period)
- e) Liver Pathology (1 period)
- f) Liver Radiology (1 period)
- g) Endoscopy/ Elective (1 period)
- h) Research (2 periods)

During the course of the 12 month fellowship, candidates will attend at least one international liver meeting (generally AASLD).

2. Training Objectives

The advanced fellowship in Hepatology and Liver Transplantation is intended to provide training over and above that received in a core Gastroenterology fellowship, with the specific goal of preparing the candidate for the care of liver disease and liver transplant patients in a Tertiary (or above) care setting. The expectation is that the candidate will meet the requirements of the United Network for Organ Sharing, and those of the American Board of Internal

Medicine. The candidate's training will allow them to be eligible for the Certificate of Added Qualification examinations in Transplant Hepatology. (Journal of Hepatology , Volume 44 , Issue 4 , Pages 655 – 657)

1. MEDICAL EXPERT/CLINICAL DECISION MAKER

The Hepatology trainee should demonstrate:

- 1.1 Diagnostic and therapeutic skills for effective care of patients with hepatobiliary disorders
- 1.2 Knowledge of:
 - Physiology of the liver and biliary system.
 - Detailed pathophysiology of the liver and biliary systems.
 - Liver pathology, including histological interpretation and specific pathological techniques.
 - Epidemiology and natural history of common and uncommon liver diseases and complications.
- 1.3 The following clinical skills:
 - Participation in the peri-operative and post-operative care of at least **30** transplant recipients. The trainee should be involved in all aspects of the recipients' care **from the time of liver transplantation and should continue to follow them longitudinally** during his/her training.
 - Performance of diagnostic and therapeutic procedures, in particular, a minimum of **30** percutaneous liver biopsies and **20** abdominal paracenteses. The candidates should observe a minimum of three liver transplantations and three organ procurements.
 - Diagnosis and management skills for effective care of patients with the following conditions of the liver and biliary tract:
 - i) Acute hepatitis: Viral, drug, toxic.
 - ii) Fulminant hepatic failure.
 - iii) Chronic hepatitis and cirrhosis.
 - iv) Complications of liver disease: ascites, hepatic encephalopathy. spontaneous bacterial peritonitis, hepatorenal syndrome.
 - v) Prevention and treatment of bleeding varices and gastropathy.
 - vi) Diagnosis and treatment of hepatocellular carcinoma.
 - vii) Diagnosis and management of tumours of the biliary system including cholangiocarcinoma
 - viii) Chronic liver diseases such as; alcohol, Wilson's disease, primary biliary cirrhosis, autoimmune hepatitis, hemochromatosis, α 1-antitrypsin deficiency.
 - ix) Gallstone disease, including the appropriate use of medical and surgical therapies.

- x) Hepatobiliary disorders associated with pregnancy.
 - xi) Preoperative evaluation and postoperative management of patients with known disease of the liver or with evidence of hepatobiliary dysfunction.
 - xii) Pediatric and congenital hepatobiliary disorders.
 - xiii) Pre-, peri-, and post-operative care of the liver transplant recipient, including management of ensuing complications
 - xiv) Assessment and selection of individuals for liver transplantation
 - xv) Appropriate selection of individuals for partial liver resection
- Use and side effects of antiviral and immunosuppressive agents in the treatment of liver disease.
 - Management of the nutritional problems associated with chronic liver disease.
- The ability to select the following diagnostic and therapeutic techniques based on indications, contraindications, limitations, interpretations and complications.
 - i) Percutaneous liver biopsies and cytological aspiration of the liver.
 - ii) Vascular radiologic procedures including hepatic angiography, and hepatic hemodynamic measurements.
 - iii) Nuclear medicine procedures including biliary scanning.
 - iv) Imaging procedures of the liver and biliary tract including ultrasound, MRI/MRA/MRCP and CT and PET scan.
 - v) Diagnostic and therapeutic upper gastrointestinal endoscopic procedures, including sclerotherapy and variceal banding.
 - vi) ERCP, including papillotomy, biliary stent placement, and other interventional biliary modalities (e.g. specialized biliary dilation procedures).
 - vii) Transvenous liver biopsy.
 - viii) Laparoscopy and laproscopic cholecystectomy.

2. COMMUNICATOR

The Hepatology trainee should be able to:

- Recognize the need for patients and their families to understand the nature of their disease, goals and possible hepatobiliary investigations and treatment.
- Educate the patient in the relevant area of disease prevention, transmission, detection, progression, and therapy to promote liver health.
- Communicate and cooperate with allied health care personnel involved in the care of individual patients afflicted with hepatobiliary diseases.

3. COLLABORATOR

The Hepatology trainee should be able to:

- Identify the role and expertise of all members of interdisciplinary teams involved in the management of hepatobiliary disease and liver transplantation.
- Actively contribute to the plan of management proposed by the interdisciplinary team.

4.- MANAGER

The Hepatology trainee should be able to:

- Work effectively and efficiently in the daily care of hospitalized and ambulatory patients with liver disease.
- Utilize time and resources effectively to provide optimum care to patients.

5. HEALTH ADVOCATE

The Hepatology trainee should be able to:

- Identify important determinants of health in liver diseases that affect patients. These include socio-economic status, education, social support systems, lifestyle, psychosocial and biologic factors.
- Understand and identify the current public policies of liver disease that effect health.
- Identify in hepatology practice the population at risk and provide the available knowledge about prevention. This involves knowing practice guidelines put forth by various provincial, national and international societies.
- Understand and identify subjects for prevention of hepatitis, screening for liver cancer, and genetic testing for hemochromatosis.

6. SCHOLAR

The Hepatology trainee should be able to:

- Recognize the importance of self-assessment in medical education in hepatology.
- Appraise and evaluate the medical literature in the field of hepatology as it applies to clinical practice.
- Recognize his/her gaps in clinical knowledge around a particular clinical question and be able to fill this gap.
- Participate in the education of peers with regards to liver disease and developments in liver transplantation.

7. PROFESSIONAL

The Hepatology trainee should be able to:

- Offer the highest quality of care with integrity, honesty and compassion.
- Practice medicine ethically consistent with obligations of a physician.
- Exhibit appropriate personal and interpersonal professional behaviours.

Weekly Schedules (as of June 2006)

a) Teaching

Tues:	12:00 – 13:00	Medical Grand Rounds	M3
Wed:	12:00 - 13:00	Transplant Grand Rounds	R2
	16:00 -17:00	GI Trainee Rounds	M3
	17:00 -18:00	*GI/Hepatology Grand Rounds	M3
Thurs:	8:45 -10:00	*Liver Pathology Rounds	LD
Friday:	12:00-13:00	*Hepatology Rounds	R2
	12:00-13:00	Hepatopancreaticobiliary Tumour Board	S10

*The Hepatology Trainee is expected to attend all liver related Rounds.

b) Clinical (confirm with individual staff members)

Dr M. Deschenes

Monday pm: Hepatitis	E2
Tues am+pm: Liver Transplant	R2

Dr P. Ghali

Tuesday am/pm: Liver Transplant	R2
Wednesday pm: GI/ hepatology	
Thursday am+ pm: General Hepatology	R2

Dr. P. Wong

Mon pm - Transplant
Tues am - Hep
Tues pm – viral
Thurs am/pm - Hep

Dr N. Hilzenrat

Mon am: Liver Transplant	R2
Thurs am: Hepatology	JGH

Dr. P. Cleland

Tues pm: Hepatology	MGH
Thurs pm: Hepatology	

Dr. V. Baffis

Contact Dr. Baffis directly

MGH

Useful Contacts / Information:

Hospital address:

Ross 2.28

687 av des Pins

Montreal, QC H3A 1A1

Canada

Main Hospital # (RVH and MGH): 514-934-1934

Main Hospital # (JGH): 514-340-8222

Locating	RVH	33333
	MGH	43333
	JGH	8232

GI Secretaries

RVH 31616

MGH 43906

In-patient Wards (RVH):

R3 35003

ICU 35886/35887 (spectralink phone)

10 Med 35372

6 Med 35135

Path 88-00502# / 398-2440

Radiology 31545

CT 31514

Reading Lists:

Main Reference books:

Zakim and Boyer - Hepatology
or Schiff – Diseases of the Liver
or Oxford Textbook of Hepatology

Sherlock and Dooley: Diseases of the Liver
and biliary System

Primer on Transplantation

Core Articles

Alcoholic Liver Disease

- McCullough, AJ., O'Connor J.F.B. alcoholic Liver Disease: Proposed Recommendations for the American College of Gastroenterology. Am J Gastroenter 1998;93(11)

Autoimmune Hepatitis

- Czaja AJ, Freese DK. Diagnosis and Treatment of Autoimmune Hepatitis. AASLD Practice Guidelines

Cholestatic Liver Disease

- Heathcote EJ. Management of Primary Biliary Cirrhosis. AASLD Practice Guidelines.
- Angulo A., Lindor KD. Primary Sclerosing Cholangitis. Clinical Challenge.

Hepatobiliary Malignancy

- DeGroen PC, Gores GJ. Biliary Tract Cancers. The New England Journal of Medicine.
- Bruix J, Sherman M. Clinical Management of Hepatocellular Carcinoma Conclusions of the Barcelona-2000 EASL Conference. Journal of Hepatology.

Liver Transplantation

- Charlton, M.. Hepatitis C Infection in Liver Transplantation. Am J of Transplantation 2001.
- Vincenti, F. What's in the Pipeline? New Immunosuppressive Drugs in Transplantation. Am J of Transplantation 2002.
- Fishman JA, Rubin RH. Infection in Organ-Transplant Recipients. Medical Progress.
- Carithers, RL, Jr. Liver Transplantation. AASLD Practice Guidelines.
- Trotter JF, Wachs M. Adult-to-Adult Transplantation of the Right Hepatic Lobe from a Living Donor. The New England Journal of Medicine.
- Wiesner RH, McDiarmis SV. MELD and PELD: Application of Survival Models to Liver Allocation. Liver Transplantation 2001.
- Kamath PS, Wiesner RH. A Model to Predict Survival in Patients With End-Stage Liver Disease.

Metabolic Liver Disease

- Tavill AS. Diagnosis and Management of Hemochromatosis. AASLD Practice Guidelines.
- Schilsky ML. Diagnosis and Treatment of Wilson's Disease. Pediatric Transplantation.

Nonalcoholic Fatty Liver

- Unknown author. American Gastroenterology Association Medical Position Statement: Nonalcoholic Fatty Liver Disease. Gastroenterology.
- Unknown author. AGA Technical Review on Nonalcoholic Fatty Liver Disease. Gastroenterology.
- Angulo P. Nonalcoholic Fatty Liver Disease. Medical Progress.

Portal Hypertension

- Runyon B. Management of Adult Patients with Ascites caused by Cirrhosis. AASLD Practice Guidelines.
- Garcia-Tsao G. Current Management of the Complications of Cirrhosis and Portal Hypertension: Variceal Hemorrhage, Ascites, and Spontaneous Bacterial Peritonitis.
- Blei AT, Cordoba J. Hepatic Encephalopathy. Practice Guidelines.
- Moore KP, et al. The management of Ascites in Cirrhosis: Report on the Consensus Conference of the International Ascites Club. Hepatology July 2003.

Viral Hepatitis

- Perrillo R., Schiff E. Adefovir Dipivoxil for the Treatment of Lamivudine-Resistant Hepatitis B Mutants.
- Lok AS., McMahon BJ. Chronic Hepatitis B. AASLD Practice Guidelines.
- Perrillo RP. Acute Flares in Chronic Hepatitis B; The Natural and Unnatural History of an Immunologically Mediated Liver Disease.
- Lok AS., Heathcote EJ. Management of Hepatitis B: 2000-Summary of a Workshop.
- Charlton M. Hepatitis C Infection in Liver Transplantation. American Journal of Transplantation 2001.
- Unknown author. Management of Hepatitis C: 2002. National Institutes of Health.
- Fried MW., Shiffman ML. Peginterferon Alfa-2a Plus Ribavirin for Chronic Hepatitis C Virus Infection.

Miscellaneous

- Unknown author. American Gastroenterological Association Medical Position Statement: Evaluation of Liver Chemistry Tests. Gastroenterology.
- Unknown author. AGA Technical Review on the Evaluation of Liver Chemistry Tests. Gastroenterology.
- Riely CA. Liver Disease in the Pregnant Patient. The American Journal of Gastroenterology.