Subspecialty Fellowship in Hepatology

Mayo Graduate School of Medicine

Mayo Clinic Jacksonville
Jacksonville, Florida
Subspecialty Fellowship in Hepatology

The one-year Subspecialty Fellowship in Hepatology at Mayo Clinic Rochester offers:

- Thorough, advanced education in inpatient and outpatient hepatology
- Intensive experience in the care and management of patients before, during and after liver transplantation
- Training that prepares you for an academic position in hepatology or clinical practice
- Credentials that fulfill the UNOS criteria for a liver transplant physician

Mayo Clinic’s favorable faculty ratio, large patient population and state-of-the-art diagnostic, therapeutic and research facilities combine to create a truly integrated educational experience. The Mayo Clinic way of graduate medical education ensures you will have the finest teaching and the broadest patient care experience possible during a busy, hands-on fellowship program.

Training at Mayo Clinic

Mayo Clinic has a long-standing tradition of practicing both the art and science of medicine. As one of the country’s largest and best-known private group practices of academic medicine, Mayo Clinic was founded on the belief that physicians need to work together, teach and learn from others, and conduct research to provide sustained, excellent patient care.
Physicians, scientists, residents, students, nurses and allied health staff members work as a team at Mayo Clinic. Our staff clinicians and scientists are called consultants in recognition of their teaching and mentoring role in the team.

Mayo Clinic teamwork spans many locations

In Jacksonville, Florida
Mayo Clinic Jacksonville
St. Luke’s Hospital

In Rochester, Minnesota
Mayo Clinic Rochester
Saint Marys Hospital
Rochester Methodist Hospital
Charter House

In Scottsdale, Arizona
Mayo Clinic Scottsdale
Mayo Clinic Hospital

Mayo Health System
Program Description

Clinical Training
During your one-year Subspecialty Fellowship in Hepatology, you will acquire skills in patient diagnosis and management, procedural techniques, teaching and research. The curriculum is carefully designed to offer a balance of clinical, didactic and investigative experience, and to prepare you for a career in academic hepatology.

Rotation Schedule
The following is a typical hepatology fellowship rotation schedule:

Outpatient
   Liver Transplant Clinic ............... 3 months

Inpatient
   Liver Transplant Service ............... 3 months

Outpatient
   Hepatobiliary Clinic ................. 5 months

Research .................................... 1 month

Rotation Descriptions
Liver Transplantation
The internationally recognized Mayo Clinic Liver Transplant Team performs approximately 100 transplants each year. More than 800 post-liver transplant patients are evaluated annually at Mayo’s liver transplant clinics.
You will spend six months of your fellowship working with the liver transplant team, gaining experience in inpatient and outpatient liver transplantation. During this time you will:

- Be involved in the evaluation of pre-liver transplant candidates.
- Care for patients awaiting liver transplantation.
- Participate in the management of patients following liver transplantation, both in the inpatient and outpatient settings.

**Hepatobiliary Clinic**

During this rotation you will help evaluate, diagnose and manage patients in the outpatient Hepatobiliary Clinic. Each year approximately 2,000 patients with a wide variety of challenging and unique hepatobiliary diseases are seen in the clinic. Numerous longitudinal clinical trials are available for patients with chronic liver disease.

**Research**

Participation in clinical research is a vital and integral component of the Hepatology Fellowship Program. Fellows are expected to become involved in clinical research projects with an appropriate mentor. A one-month block of time is allocated for analyzing data and writing manuscripts.

**Didactic Training**

Clinical conferences, seminars, small discussion groups, journal clubs and one-on-one instruction are all an integral part of Mayo Clinic’s Subspecialty Fellowship in Hepatology. You will attend a variety of weekly conferences relevant to the discipline of hepatology. You also may find topics of special interest in conferences sponsored by the departments of internal medicine, surgery, oncology, diagnostic radiology, and laboratory medicine and pathology. The standard conference schedule is shown below.
Conference Schedule

Monday
12:15 p.m. Gastroenterology Research Conference

Tuesday
7:15 a.m. Pancreas Interest Group Meeting
7:15 a.m. Motility Interest Group Meeting
7:15 a.m. Esophageal Interest Group Meeting
Noon Transplant Grand Rounds

Wednesday
7:30 a.m. Liver Biopsy Conference (non-transplant cases)
8:00 a.m. Liver Biopsy Conference (transplant cases)
4:00 p.m. Liver Transplant Selection Conference

Thursday
7:00 a.m. Inflammatory Bowel Interest Group Meeting
12:15 p.m. Gastroenterology/Hepatology Grand Rounds

Friday
12:15 p.m. Hepatobiliary Conference

Case Studies
During your Hepatology Subspecialty Fellowship, you will prepare case study presentations. You will present the pertinent information of an interesting case, conduct an in-depth discussion of that case, and create a current bibliography.

Teaching Opportunities
You will have the opportunity to teach Mayo Medical School students and visiting students from other medical schools through bedside instruction and formal didactic lectures.
Cardiac Life Support Certification

Certification in Basic Cardiac Life Support and Advanced Cardiac Life Support (ACLS) is required for all Mayo Clinic residents and fellows. ACLS courses are held during the last week of June, just before the start of the academic year. The ACLS course also is offered evenings every three months during the year to facilitate recertification.

Research Training

Your research opportunities at Mayo Clinic are outstanding. You are encouraged to participate in research projects with the consulting staff. This includes opportunities for clinical studies and laboratory-based projects.

As a hepatology fellow, you will participate in clinical research projects with dozens of potential projects to choose from. Many of our staff hepatologists and hepatobiliary surgeons conduct research, and they welcome participation from fellows.

A research mentor will help you with protocol development as well as the conduct of your study, data analysis and final manuscript preparation. Virtually all Mayo Clinic fellows present their work at national meetings and publish at least one original paper. Mayo Clinic’s large number of clinical trials and its liver transplant database facilitate data acquisition and analysis.

A number of intramurally and extramurally funded fellowships are available if you are interested in additional research training in preparation for an academic career.
Bench to bedside
Mayo Clinic is committed to basic and clinical research that leads to better patient care.

Mayo Clinic’s hallmark is teamwork —
• Among basic and clinical investigators
• Among investigators and clinical practitioners
• Across Mayo Clinic sites
• Between Mayo Clinic and other institutions

Mayo Clinic people in research —
• 250+ full-time physicians and scientists
• 396+ associates and fellows
• 1318+ administrative and allied health staff

Research funding sources —
• Extramural funds = $130 million+
• Mayo Clinic funds/other revenue = $110 million+

General Program Information

Patient and Service Mix
As a regional medical center for the Midwest, Mayo Clinic Rochester registers more than 320,000 patients each year. Eighty percent of the clinic’s patients are self-referred and come from within a day’s drive. Although Mayo Clinic has a reputation for successfully handling the most obscure and difficult medical problems for people from around the world, common medical concerns are actually the norm. This allows you to see and treat an exceptional variety of illnesses during your clinical training.
Call Frequency
Your call schedule will vary by individual rotation. Mayo Clinic follows the recommendations of the Accreditation Council for Graduate Medical Education.

Moonlighting
Moonlighting is permitted for licensed residents and fellows beyond the PGY-1 level. Moonlighting activities may be scheduled during those times when you are assigned to consultative or outpatient rotations.

Committee Assignments
You will be given an opportunity to gain experience in a number of administrative capacities during your training. Committee assignments will provide you with a variety of experience.

Evaluation
To ensure that you acquire adequate knowledge and develop your technical skills, your performance will be monitored carefully during the course of your fellowship. You will be evaluated formally by your supervising faculty member after each clinical rotation. In addition, you will regularly evaluate the faculty to ensure that your educational needs are being met.
Career Development

You will meet periodically with the training program director and the staff members supervising your research project to discuss your career goals. Most of the graduates of our hepatology fellowship program have taken academic jobs at major universities or medical centers. Their competitiveness for these positions reflects the responsibility Mayo Clinic’s staff assumes for the career development of our advanced hepatology fellows.

Faculty

In addition to caring for patients in their clinical practices, Mayo Clinic’s faculty members are committed to teaching and facilitating the growth of medical knowledge. Many of our faculty have published and lectured extensively and are well-regarded in their field. You will have direct access to these individuals throughout your training program.

Mayo Clinic has a large faculty in hepatology, many of whom have national and international reputations in their area of interest. You will work one-on-one with a staff hepatologist during all aspects of your training.

One of the many strengths of the program is the rich diversity of its members. All members participate in the education of the hepatology fellows and provide research opportunities for them. Bedside and informal teaching is part of the regular training program.
Faculty Areas of Clinical Interest

Listed below are the members of the Hepatology Interest Group and the Liver Transplant and Failure Unit, along with their areas of clinical interest.

D. J. Brandhagen, M.D.  Hemochromatosis
M. R. Charlton, M.D.  Liver Transplantation/Nutrition
A. J. Czaja, M.D.  Autoimmune Hepatitis
P. C. de Groen, M.D.  Hepatobiliary Neoplasia
E. Rolland Dickson, M.D.  Cholestatic Liver Disease
D. K. Freese, M.D.  Pediatric Hepatology
G. J. Gores, M.D.  Hepatobiliary Neoplasia/Liver Transplantation
J. B. Gross, M.D.  Viral Hepatitis
J. E. Hay, M.D.  Liver-related Bone Disease/Liver Transplantation
P. S. Kamath, M.D.  Portal Hypertension
W.R. Kim, M.D.  General and Transplant Hepatology
R.A.F. Krom, M.D.  Transplant Surgery
M. J. Krowka, M.D.  Hepatopulmonary Syndrome/Portopulmonary Hypertension
N. F. LaRusso, M.D.  Hepatobiliary Neoplasia
K. D. Lindor, M.D.  Cholestatic Liver Disease
D. B. McGill, M.D.  Alcoholic Liver Disease/Non-alcoholic Steatohepatitis
S. L. Nyberg, M.D.  Transplant Surgery/Artificial Liver
J. J. Poterucha, M.D.  Viral Hepatitis/Liver Transplantation
V.J. Shah, M.D.  Alcoholic Liver Disease/Portal Hypertension
J. L. Thistle, M.D.  Biliary Tract Disease
R. H. Wiesner, M.D.  Liver Transplantation
N.N. Zein, M.D.  Viral Hepatitis/Liver Transplantation
Advisers

You will be assigned a faculty adviser who can provide comprehensive educational advice and personal support. Your adviser also will serve as a contact point, introducing you and your family to Rochester and the Mayo Clinic system.

Visiting Professors

Each year, approximately 20 visiting faculty members are invited by the divisions of gastroenterology and transplantation surgery to participate in conferences, critique research projects, and socialize with the fellows. One of these is a distinguished clinical investigator selected by the fellows. You will be encouraged to take full advantage of these opportunities.

Facilities and Resources

Facilities

The Mayo Clinic campus in Rochester, Minnesota, includes two hospitals with nearly 1,300 beds, a Level One Trauma Center, a comprehensive outpatient medical complex, a variety of research facilities, and several full-service laboratories and on-site pharmacies. More than 800 staff physicians represent virtually all clinical specialties.

The Hepatobiliary Clinic, Liver Transplant Clinic, and the inpatient Liver Transplant and Failure Service are each independent units with their own staff and facilities. A full range of laboratory, radiographic, and pathology services are available for the care of patients with liver diseases.
Libraries

Mayo Clinic’s library system in Rochester has one of the largest medical collections in the world — more than 4,300 journal subscriptions, nearly 353,000 bound volumes, and several medical databases and search engines. The main library provides study space, computers, microfilm readers and reader-printers, translations, duplicating machines, and book ordering and audiovisual services.

Reference librarians can arrange interlibrary loans, perform literature searches, and teach you how to use the computer database services that link Mayo Clinic to a global network of scientific information. More than 625 clinical conferences are preserved on videotape each year. You can view these tapes at the library or check them out for use at home.

Branch libraries include a health-related sciences library, two hospital libraries and the Learning Resource Center (LRC). The LRC, devoted mainly to the Mayo Medical School curriculum, offers special collections emphasizing women’s issues in medicine and health, medical education, and ethics.

Computer Services

Macintosh and IBM personal computers and software are available for residents and fellows to use. In addition, Mayo Clinic’s Microcomputer Education Center provides training in the use of computers for word processing, data collection and data analysis.
Telecommunications System

Mayo’s clinics in Rochester, Scottsdale and Jacksonville are linked via a sophisticated telecommunications system, which provides video teleconferencing and data transmission. Staff can have live, interactive consultations with physicians and their patients at the other sites via TV monitors. In addition, X-rays, laboratory test results, CT scans, ECG tests, angiograms and pathology slides can be transmitted between sites.

An advanced telecommunications system also is the foundation for Mayo Clinic’s unique five-digit telephone dialing and pager system. Physicians can be easily accessed for consultations or updates, strengthening the teamwork among consultants, fellows, residents and allied healthcare staff at all three practice sites.

Compensation and Benefits

 Vacation and Trip Policy

You may take up to 15 working days (three weeks) each year for vacation.

You are encouraged to present your research at regional and national meetings. If you are selected to make a presentation, Mayo Clinic will pay the authorized expenses for you to attend that meeting (within the United States).
Stipends and Other Benefits

Mayo Clinic has highly competitive stipends and a benefits package that includes:

• A comprehensive medical care plan
• Short-term disability insurance
• Voluntary basic life insurance, disability insurance, and family life insurance
• Voluntary additional life insurance
• Voluntary accidental death and dismemberment insurance
• A dental assistance plan
• Excess personal liability insurance
• Professional liability coverage

Additional information about stipends and benefits will be provided during personal interviews.

The Rochester Community

Home of the original Mayo Clinic and an array of successful technology-based companies, Rochester, Minnesota, welcomes thousands of visitors from around the world each year. Rochester, population 80,000, provides all the benefits of small town living while offering amenities associated with larger cities.

If you’re interested in the fine arts, you’ll find an active network of enthusiasts who support a symphony orchestra and chorale, four theaters, a community art center, and several choruses and bands.

Rochester offers excellent sports and physical fitness facilities. Within the city limits are six golf courses; tennis and health clubs; an extensive network of walking, biking and in-line skating trails; nearly 2,000
acres of city parks; and a community recreation center. Several state parks are nearby, and it’s a very short drive to fishing, hunting, hiking, camping, boating, skiing or skating.

The Twin Cities of Minneapolis and St. Paul are only 80 miles north of Rochester. Among many attractions are the nationally famous Guthrie Theatre, the Minnesota Orchestra, the St. Paul Chamber Orchestra and the Walker Art Center. Both professional and collegiate baseball, football and basketball teams are based there. The Twin Cities also have world-class shopping and restaurants, including the Mall of America.

Good, moderately priced housing is relatively easy to find in Rochester. The public school system is one of the best in the state. Rochester has been selected as “one of the best places to live” in the U.S. by *Money* magazine for several consecutive years.

Close proximity between Mayo Clinic and home facilitates time with family and makes call from home quite manageable.
Appointments and Applications

There are two positions available in Mayo Clinic’s Subspecialty Fellowship in Hepatology each year on a competitive basis. To be eligible, you must have completed three years of training in an accredited internal medicine program. Candidates who also have completed two years of training in gastroenterology will be given preference.

To apply for this fellowship, you need to submit:

- A completed Mayo Graduate School of Medicine application form
- Official college, graduate school and medical school transcripts
- An official record of board scores (NBME, FLEX, USMLE, LMCC, VQE or FMGEMS)
- A dean’s letter and two other letters of recommendation
- A curriculum vitae
- A personal statement
- A valid ECFMG certificate (if you graduated from medical school outside of the United States or Canada)
- Three letters of recommendation

One letter of recommendation should be written by your internal medicine residency program director or the director of your gastroenterology fellowship. A second letter should be provided by your medical school dean.

Applications for each academic year, which begins July 1, should be completed by January 1 of the year preceding the year you wish to begin your fellowship. If you are considered for an appointment, you will be asked to visit Mayo Clinic Rochester for an interview with the program director and selected faculty. Interviews are conducted from January through June each year.
Inquiries

If you would like an application form or more information, please contact:

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For more information about the Mayo Graduate School of Medicine, please visit our Web site at http://www.mayo.edu/mgsm/gsm.htm

If you would like to discuss the Subspecialty Fellowship in Hepatology with Mayo Clinic alumni living in your area, please write to us for a list of their names.
Notes