LSU Neurotology Fellowship

FELLOWSHIP CANDIDATE VISIT

JULY 2018 START DATE
Overview

ACGME Initial Accreditation 2013

1 Fellow per 2-year Cycle

Fellowship Graduates

- Sam Spear, MD – Completed fellowship June 2015; Lt Col, USAF, currently practicing at San Antonio Military Medical Center
- Rahul Mehta, MD – Advanced Otology/Rhinology (1 year) completed June 2014; now LSU Otolaryngology faculty

Current Fellow

- Joshua Sappington, MD – 2nd Year
The LSU Neurotology-Skull Base Fellowship

Comprehensive skull base experience

Full spectrum of otology/neurotology

Significant experience with:

- Rhinologic endoscopic & transfacial skull base approaches
- Craniofacial techniques
- Neurosurgical aspects of care
- Neuroradiology, skull base histopathology
- Skull base reconstruction
Program Sites

LSU New Orleans
- Sponsoring Institution
- Otolaryngology Residency with 17 residents in PGY1-PGY5

Our Lady of the Lake Regional Medical Center
- Primary Institution

Additional sites:
- West Jefferson Medical Center
- Children’s Hospital New Orleans
- Ochsner Medical Center New Orleans
Neurotology Core Faculty

Moises A. Arriaga, MD
- Fellowship Program Director
- Neurotology

Alexander Sevy, MD
- Neurotology

Laura Hetzler, MD
- Residency Director
- Facial plastic surgery
- Facial reanimation

Daniel Nuss, MD
- Chairman
- Endoscopic skull base surgery

Additional Program Faculty

Frank Culicchia, MD
- Neurosurgery Chairman
- West Jefferson cases

Kelly Scrantz, MD
- Neurosurgery NMC
- Baton Rouge cases

Rahul Mehta, MD
- Advanced Otology/Rhinology
The LSU ENT Clinical Faculty:

Phillip Allen, MD
Moises Arriaga, MD
Henry Barham, MD
R. Graham Boyce, MD
Bradley Chastant, MD
Jennifer Daigle, MD
Michael DiLeo, MD
Michael Dunham, MD
Celeste Gary, MD
Laura Hetzler, MD
Jeffrey Hotaling, MD

Jeffrey Joseph, MD
Sohit Kanotra, MD
Kevin McLaughlin, MD
Andrew McWhorter, MD
Rahul Mehta, MD
Daniel Nuss, MD
Robert Peden, MD
Laura Pelaez, MD
Anna Maria Pou, MD
Justin Tenney, MD
Rohan Walvekar, MD
Fellowship Philosophy

**Neurotology clinical training:** Excellence in all aspects of surgical and office neurotology as outlined by the ACGME

**Anterior Endoscopic Skull Base training:** Skills in true three-dimensional tumor management

**Robust research opportunities:** Clinical, basic and translational science related to neurotology
Our Lady of the Lake Regional Medical Center

Baton Rouge

- South Louisiana’s major academic hospital
  - OLOL Pediatrics Residency
  - 5 LSU residencies (EM, IM, surgery, psychiatry, ENT) rotate here as well as OMFS and several outside programs
  - Schools of Nursing, PA, Resp. Therapy, Rad Tech, PT Assist
- Over 600 beds
- Largest hospital in Louisiana
- LSU Voice Center, OLOL/Mary Bird Perkins Head and Neck Center
- * Gamma Knife Icon
- Extensive commitment to education
Clinical Resources – Baton Rouge

OLOL Hearing and Balance Center
- Adult and Pediatric Neurotology – Skull Base
- Active Vestibular Team
  - 6 Audiologists and 2 Vestibular Physical Therapists
- Facial Rehabilitation Team
- Adult and Pediatric CI Center
- OLOL Head and Neck Center – Oncology and Anterior Skull Base Surgery
- Gamma Knife ICON
- NeuroMedical Center Partnership

Fellow Activities: Clinic and OR and most conferences
West Jefferson Medical Center

New Orleans
- Adult Neurotology – Skull Base
- Active Vestibular Team
  - 3 Audiologists and 2 Vestibular Physical therapists
- Part of Neurosurgery / Neurology Group
- Adult CI Center
- Pediatric CI through Childrens Hospital New Orleans
- Close collaboration with LSU Neurosurgery and Anterior Skull Base Surgery with Dr. Nuss
- Cyberknife

Fellow Activities: OR, Neurosurgery Rotation, Cyberknife Rotation
Research Resources

Basic Science collaborators
- Jennifer Lentz, PhD, Ham Farris, PhD
- School of Allied Health

Anatomic Collaboration
- Center for Advanced Practice

Clinical Studies
- Prospective (Otonomy, Balloon), Retrospective Clinical

Fellowship Specifics
- PhD Research Coordinator
- PhD Research Audiologist
- Funding for Statistician
- Research Rotation or Research Time
- MD Fellowship Coordinator
Fellow Research Presentations/Publications

- SCD v Thin – Torok Award - ANS
- SCD in Pediatrics - AOS
- Temporal Bone Encephalocele Repair - NASBS
- EAC Carcinoma with parotid and facial nerve involvement - NASBS
- Skull Base Adenocystic CA - NASBS
- CI and Cautery
- CI Trajectory
- MRI Prediction in DSC
- Encephalocele Repair Technique
- MRI Techniques in Acoustic Neuroma
- Pediatric Skull Base Tumors
- Unusual Temporal Bone Carcinoma
- CSF Leak Prevention in AN
- Hydroxyapatite Cement Removal
- Hearing Preservation in AN
- Haste Imaging Pitfalls
- Carotid Resection in SBS
**Sample Fellow operative experience (through 13 months)**

<table>
<thead>
<tr>
<th>Approaches for Skull Base Surgery</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Middle fossa approach for removal of tumor</td>
<td>12</td>
</tr>
<tr>
<td>Posterior fossa approach for removal of tumor</td>
<td>52</td>
</tr>
<tr>
<td>Combined approach for CPA</td>
<td>1</td>
</tr>
<tr>
<td>Decompression of IAC</td>
<td>1</td>
</tr>
<tr>
<td>Repair encephalocele</td>
<td>23</td>
</tr>
<tr>
<td><strong>Total Approaches For Skull Base Surgery</strong></td>
<td><strong>89</strong></td>
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<table>
<thead>
<tr>
<th>Resection of Neurologic Tumors</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Paraganglioma tumor surgery</td>
<td>7</td>
</tr>
<tr>
<td>Extradural/petrous apex</td>
<td>1</td>
</tr>
<tr>
<td>IAC lesions</td>
<td>8</td>
</tr>
<tr>
<td>Cavernous sinus, extradural</td>
<td>1</td>
</tr>
<tr>
<td>Kawase triangle, intradural</td>
<td>1</td>
</tr>
<tr>
<td>Facial nerve tumor</td>
<td>1</td>
</tr>
<tr>
<td>Retrosigmoid, extradural</td>
<td>2</td>
</tr>
<tr>
<td>Retrosigmoid, intradural</td>
<td>20</td>
</tr>
<tr>
<td>Translabyrinthine</td>
<td>27</td>
</tr>
<tr>
<td><strong>Total Resection of Neurologic Tumors</strong></td>
<td><strong>68</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Temporal Bone Resection</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Reconstruction After Resection of Neurotologic Tumors</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>By tissue graft (fat, fascia, etc)</td>
<td>64</td>
</tr>
<tr>
<td>By local or regional vascularized flap</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total Reconstruction After Resection of Neurotologic Tumors</strong></td>
<td><strong>68</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vestibular Surgery</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Endolymphatic sac surgery</td>
<td>16</td>
</tr>
<tr>
<td>Labyrinthectomy-transcanal</td>
<td>1</td>
</tr>
<tr>
<td>Labyrinthectomy-transmastoid</td>
<td>11</td>
</tr>
<tr>
<td>Middle ear perfusion</td>
<td>3</td>
</tr>
<tr>
<td>Semicircular canal dehiscence repair</td>
<td>2</td>
</tr>
<tr>
<td>Vestibular nerve section</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Vestibular Surgery</strong></td>
<td><strong>36</strong></td>
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</table>

<table>
<thead>
<tr>
<th>Repair CSF Leak</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Middle cranial fossa</td>
<td>17</td>
</tr>
<tr>
<td>Transmastoid</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total Repair CSF Leak</strong></td>
<td><strong>21</strong></td>
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</tbody>
</table>
### Fellow operative experience (continued)

#### Rehabilitative Surgery

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Count</th>
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<tbody>
<tr>
<td>Congenital aural atresia</td>
<td>4</td>
</tr>
<tr>
<td>Cochlear implantation</td>
<td>45</td>
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<tr>
<td>Auditory brainstem implant</td>
<td>0</td>
</tr>
<tr>
<td>Electromagnetic hearing device</td>
<td>1</td>
</tr>
<tr>
<td>Electromagnetic hearing device removal/repair</td>
<td>0</td>
</tr>
<tr>
<td>Osseointegrated implant</td>
<td>25</td>
</tr>
<tr>
<td>Osseointegrated implant replacement</td>
<td>0</td>
</tr>
<tr>
<td>Stapedectomy</td>
<td>26</td>
</tr>
<tr>
<td><strong>Total Rehabilitative Surgery</strong></td>
<td><strong>101</strong></td>
</tr>
</tbody>
</table>

#### Stereotactic Radiation for Skull Base Lesions

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>One complex lesion</td>
<td>2</td>
</tr>
<tr>
<td>Application of stereotactic frame</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total Stereotactic Radiation for Skull Base Lesions</strong></td>
<td><strong>2</strong></td>
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</table>

#### Diagnosis

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paraganglioma tumor</td>
<td>5</td>
</tr>
<tr>
<td>Vestibular schwannomas</td>
<td>53</td>
</tr>
<tr>
<td>Facial nerve tumors</td>
<td>4</td>
</tr>
<tr>
<td>Vestibular disease</td>
<td>32</td>
</tr>
</tbody>
</table>

#### Facial Nerve Surgery

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decompression: lateral to geniculate ganglion</td>
<td>6</td>
</tr>
<tr>
<td>Decompression: total-transtemporal</td>
<td>2</td>
</tr>
<tr>
<td>Facial nerve repair: intratemporal</td>
<td>2</td>
</tr>
<tr>
<td>Facial nerve repair: extracranial</td>
<td>1</td>
</tr>
<tr>
<td>XII-VII anastomosis</td>
<td>0</td>
</tr>
<tr>
<td>Nerve graft harvest</td>
<td>1</td>
</tr>
<tr>
<td>Facial nerve repair: medial to geniculate ganglion</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total Facial Nerve Surgery</strong></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

#### Middle Ear and Mastoid

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tympanoplasty</td>
<td>88</td>
</tr>
<tr>
<td>Tympanomastoidectomy</td>
<td>58</td>
</tr>
<tr>
<td>Mastoidectomy</td>
<td>87</td>
</tr>
<tr>
<td>Revision mastoidectomy</td>
<td>20</td>
</tr>
<tr>
<td>Mastoid obliteration</td>
<td>0</td>
</tr>
<tr>
<td>Middle ear exploration</td>
<td>1</td>
</tr>
<tr>
<td>Perilymph fistula repair</td>
<td>9</td>
</tr>
<tr>
<td>Ear canal procedures</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total Middle Ear and Mastoid</strong></td>
<td><strong>268</strong></td>
</tr>
</tbody>
</table>

**GRAND TOTAL**: **768**
Rotations/Schedule
- Daily Schedule

- M: AM Clinic OLOL or Surgery Vista (LSU Health BR) or surgery Children’s NO
- T: AM/PM Surgery OLOL
- W: OLOL Clinic or Endoscopic Surgery
- Th: WJMC Surgery
- F: Research / Surgery / Clinic
Rotations/Schedule

- Off- Service Rotations

○ **One- or two-week rotations:**
  - **Neurology** – NeuroMedical Center Baton Rouge
  - **Radiation Therapy** –
    - Cyberknife WJMC
    - Gamma Icon – OLOL-MBP (acquired October 2016)
  - **Neuroradiology** – OLOL – Baton Rouge
  - **Neuro-ophthalmology** – New Orleans or LSUBR
  - **Audiology/Electrophysiology** – OLOL – BR
  - **Physical Therapy** – Vestibular/Facial – OLOL – BR

○ **One-month rotation:**
  - Neurosurgery – WJMC New Orleans
Rotations/Schedule
- Didactics

Conferences:
- Textbook Review – Weekly – Monday
- Otolaryngology Didactic Day – Monthly
- Journal Club –
- Multidisciplinary – Neurology/ Neurosurgery / PT /Radiology – Mondays at Neuromedical Center
- Neuroradiology – Monthly
- Otopathology – Quarterly
- Otology Lectures for Residents – Monthly
- Cochlear Implant Conference – q2 months
- Vestibular Conference – q2 months
Rotations/Schedule
- Responsibilities

Call – Service
  ◦ Telephone Call Primary
  ◦ Backup Residents

Resident – Fellow Interactions
  ◦ Otology –
    • Residents Primary OLOL (Two Rooms Tuesday)
    • Fellow Primary WJMC
    • Resident Case Coverage Vista
  ◦ Neurotology – Fellows Primary
  ◦ Neurosurgery Residents WJMC Only - collaborative
LSU Otolaryngology Overview

- 70% Otolaryngologists in Louisiana
- 3-City Residency Program
- 2-City Fellowship
- Post Katrina Evolution
Practical matters – this is a regional fellowship

- Fellow lives in Baton Rouge
- A studio apartment is provided in New Orleans at no cost to the fellow
Summary

- Comprehensive Training
  - Clinical, Surgical, All Aspects
- Integrated into Larger Head and Neck/ SBS Program
- Key Clinical Responsibilities
- Abundant Research Opportunities
- Progressive Responsibility in OR and Patient Care