



## **PCCCMU 3 WEEKS TRAINING COURSE**

### **PET RADIOPHARMACEUTICALS PRODUCTION**

#### **TRAINEE QUALIFICATIONS:**

1. Graduated in Pharmacy / Chemistry / Medical physics / Biology / Medicine / Radiological technology / Paramedical science or related fields.
2. Have experience in laboratory work.
3. Good in Thai or English, can speak and understand reasonably well in both conversational and academic language.

**NUMBER OF TRAINEE:** 1-8

**TRAINING PERIOD:** 3 weeks / 15 training days / 120 training hours

**VENUE:** PET/CT & Cyclotron Center Chiang Mai University, Center for Medical Excellence, Faculty of Medicine, Chiang Mai University, Muang, Chiang Mai, 50200 THAILAND

**COURSE FEE\*:** 140,000 THB for one trainee,

80,000 THB for a trainee in case of more than one person.

\*PET/CT & Cyclotron Center Chiang Mai University reserves the right to make adjustments to pricing and course contents at any time for reasons including, but not limited to, consumables price fluctuation, personnel availability and equipment performance.

**TRAINING ACTIVITIES:** Lecture 24 hours, Laboratory practice 96 hours

**OBJECTIVES:** In the training course, the trainee will be given the opportunities to;

1. Understand the whole process of F-18-FDG, C-11-Methionine and N-13-Ammonia production and Quality Control
2. Practice hands-on synthesis of F-18-FDG with F300E synthesizer, and C-11-Methionine and N-13-Ammonia with CFN-MPS100 synthesizer
3. Perform quality control tests according to international standard
4. Experience the concept of Quality Management and relevant regulations, including Radiation protection, Radiation Safety management and Radiopharmaceutical cleanrooms in Cyclotron facility



5. Observe the workflow and administration of F-18-FDG PET/CT for routine clinical examination in the Hospital setting

6. Understand the concept of Clinical applications of PET/CT imaging in oncology, cardiology and neurology, and the novel imaging modalities; PET/CT and SPECT/CT

**COURSE CONTENTS**

**HOUR(S)**

**Lecture Practice**

Introduction to Hospital Cyclotron and Radiation Protection	9	28
<ul style="list-style-type: none"> <li>• Radiation safety management in cyclotron unit</li> <li>• Cyclotron structure</li> <li>• Cyclotron operation</li> <li>• Cyclotron targetry</li> <li>• Radionuclide transfer</li> <li>• Clinical applications of PET/CT imaging in oncology, cardiology and neurology</li> <li>• Imaging modalities; PET/CT and SPECT/CT</li> <li>• Quality Management</li> </ul>		
PET Radiopharmaceuticals production	7	28
<ul style="list-style-type: none"> <li>• F-18- FDG, C-11-Methionine and N-13-Ammonia synthesis chemistry</li> <li>• Chemicals &amp; equipment preparation</li> <li>• Synthesis module; F300E and CFN-MPS100 SUMITOMO</li> </ul>		
Quality control testing	4	28
<ul style="list-style-type: none"> <li>• Radionuclidic purity</li> <li>• Radiochemical purity</li> <li>• Chemical impurities</li> <li>• Sterility test</li> <li>• Endotoxin test</li> </ul>		
GMP requirement for F-18-FDG manufacture	4	12
<ul style="list-style-type: none"> <li>• Thai GMP (follow the PICS GMP)</li> <li>• EU GMP</li> <li>• Radiopharmaceutical cleanrooms</li> <li>• Trouble shooting</li> </ul>		
<b>TOTAL</b>	<u>24</u>	<u>96</u>



**TRAINING ASSESSMENT:** 80% passing of MCQ test

100% success in practical assignment

**For more detail please contact:** PCCCMU Radiopharmaceutical production team

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