

ESP ADVANCED TRAINING (EAT) CENTER FOR PULMONARY PATHOLOGY

Proposed centre: **Padova (Italy)**

Proposed specific area: **Pulmonary Pathology**

Proposed chair of the centre and head of the training program: **Prof. Fiorella Calabrese**

Pulmonary Pathology knowledge has been significantly improved over the past decade. Accurate diagnosis based also on a wide use of ancillary techniques applied to small biopsies and cytology has become crucial for the patient management (prognosis and treatment).

Rationale / Aim of training

Pulmonary diseases have been increasing concerning either tumoural and non-tumoural pathology. The pathologist has become even more important in the oncological field for the prognostic stratification and therapeutic choices, as well as fundamental in lung transplant pathology, from the explanted lung diagnosis to the follow-up monitoring.

Details about specific areas in which training will be offered:

- 1) Standardization of pre-analytical procedures;
- 2) Appropriate use and interpretation of special techniques: immunohistochemistry/immunocytochemistry, molecular pathology, morphometric analysis and electron microscopy;
- 3) Weekly multidisciplinary team discussions in different topics: 1) interstitial lung diseases (on Wednesday afternoon) 2) lung tumours (on Wednesday morning) 3) lung transplant –pre-transplant evaluation- (on Monday afternoon) 4) lung transplant –post-transplant evaluation- (on Friday afternoon);
- 4) Experience in the diagnosis of tumoural lung diseases and non-tumoural lung diseases, in particular interstitial lung diseases and lung transplant pathology;
- 5) Training in tissue biobanking.

EAT Pulmonary Pathology Proposed Center

Padova University Hospital is a referral centre for all pulmonary diseases. Pathology laboratory holds ISO9001 certification and a frozen sample biobank is available and obtained EQA Lung accreditation for PD-L1, ALK, ROS1, EGFR biomarkers in 2018. The Head of the training programme (Prof. Fiorella Calabrese) will contact the trainee in order to send the invitation letter, as well as to assist in finding low cost accommodation and in obtaining the necessary visa, insurance or other documents. Moreover, she will be the tutor during the training program and will provide a detailed certificate after the completion of the programme.

Scientific contents/fields

- Non-tumoural Pulmonary Pathology
- Rare lung and mediastinal tumours

- Lung Transplant Pathology
- Special Techniques

Projected Results

- Diagnosis accuracy
- Reporting according with guidelines and actual classifications
- Decision capacity
- Resources planning

Name of center, address	Padova University Hospital. Dept. Cardiac, Thoracic, Vascular Sciences and Public Health, University of Padova; Pathological Anatomy Section, via A. Gabelli 61, 35121 Padova (Italy).
Chair	Fiorella Calabrese
Head of training programme	Fiorella Calabrese
Details about specific areas in which training is offered	1. Non-neoplastic disorders, 2. Lung transplant pathology 3. Lung tumours
Number of positions offered for each year	3
Expected duration of training	3 months
Specific period of the year	January - June
Contact address	Fiorella Calabrese fiorella.calabrese@unipd.it . +390498272268

LIST OF PUBLICATIONS OF THE HEAD OF THE TRAINING CENTER (Prof. Fiorella Calabrese) (Key references: 2018-2019)

- 1) Pasello G, Zago G, Lunardi F, Urso L, Kern I, Vlacic G, Grosso F, Mencoboni M, Ceresoli GL, Schiavon M, Pezzuto F, Pavan A, Vuljan SE, Del Bianco P, Conte P, Rea F, **Calabrese F**. *Malignant pleural mesothelioma immune microenvironment and checkpoint expression: correlation with clinical-pathological features and intra-tumor heterogeneity over time*. Ann Oncol. 2018; 29:1258-1265.
- 2) Warnecke G, Van Raemdonck D, Smith MA, Massard G, Kukreja J, Rea F, Loor G, De Robertis F, Nagendran J, Dhital KK, Moradiellos Díez FJ, Knosalla C, Bermudez CA, Tsui S, McCurry K, Wang IW, Deuse T, Lesèche G, Thomas P, Tudorache I, Kühn C, Avsar M, Wiegmann B, Sommer W, Neyrinck A, Schiavon M, **Calabrese F**, Santelmo N, Olland A, Falcoz PE, Simon AR, Varela A, Madsen JC, Hertz M, Haverich A, Ardehali A. *Normothermic ex-vivo preservation with the portable Organ Care System Lung device for bilateral lung transplantation (INSPIRE): a randomised, open-label, non-inferiority, phase 3 study*. Lancet Respir Med. 2018; 6:357-367.
- 3) Pelosi G, Bianchi F, Dama E, Simbolo M, Mafficini A, Sonzogni A, Pilotto S, Harari S, Papotti M, Volante M, Fontanini G, Mastracci L, Albini A, Bria E, **Calabrese F**, Scarpa A. *Most high-grade neuroendocrine tumours of the lung are likely to secondarily develop from pre-existing carcinoids: innovative findings skipping the current pathogenesis paradigm*. Virch. Arch. 2018; 472:567-577.
- 4) Roux A, Levine DJ, Zeevi A, Hachem R, Halloran K, Halloran PF, Gibault L, Taupin JL, Neil DAH, Loupy A, Adam BA, Mengel M, Hwang DM, **Calabrese F**, Berry G, Pavlisko EN. *Banff Lung Report: Current knowledge and future research perspectives for diagnosis and treatment of pulmonary antibody-mediated rejection (AMR)*. Am Transplant. 2018; 28.
- 5) Lunardi F, Vuljan SE, Perissinotto E, Pezzuto F, Malacrida S, Bugin S, Bertozzi I, Snijders D, Rizzo S, Barbato A, **Calabrese F**. *Nasopharyngeal aspirate value in paediatric chronic lower respiratory tract illness*. Eur Respir J. 2018 7; 51.
- 6) Bazzan E, Tinè M, Biondini D, Benetti R, Baraldo S, Turato G, Faggioli S, Sonzogni A, Rigobello C, Rea F, **Calabrese F**, Foschino-Barbaro MP, Miranda E, Lomas DA, Saetta M, Cosio MG. *$\alpha(1)$ -Antitrypsin Polymerizes in Alveolar Macrophages of Smokers With and Without $\alpha(1)$ -Antitrypsin Deficiency*. Chest. 2018; 154:607-616.
- 7) Pelosi G, Papotti M, Righi L, Rossi G, Ferrero S, Bosari S, **Calabrese F**, Kern I, Maisonneuve P, Sonzogni A, Albini A, Harari S, Barbieri F, Capelletto E, Catino AM, Cavone D, De Palma A, Fusco N, Lunardi F, Maiorano E, Marzullo A, Novello S, Papanikolaou N, Pasello G, Pennella A, Pezzuto F, Punzi A, Prisciandaro E, Rea F, Rosso L, Scattone A, Serio G. *Pathologic Grading of Malignant Pleural Mesothelioma: An Evidence-Based Proposal*. J Thorac Oncol. 2018; 13:1750-1761.
- 8) Diana P, Zampieri D, Furlani E, Pivetta E, **Calabrese F**, Pezzuto F, Marulli G, Rea F, Ori C, Persona P. *Lung ultrasound as a monitoring tool in lung transplantation in rodents: a feasibility study*. J Thorac Dis. 2018; 10:4274-4282.
- 9) Lunardi F, Pezzuto F, Vuljan SE, **Calabrese F**. *Idiopathic Pulmonary Fibrosis and Antifibrotic Treatments: Focus on Experimental Studies*. Arch Pathol Lab Med. 2018; 142:1090-1097.
- 10) Schiavon M, Faggi G, Rebusso A, Lunardi F, Comacchio G, Di Gregorio G, Feltracco P, Gregori D, **Calabrese F**, Marulli G, Cozzi E, Federico R. *Extended criteria donor lung*

reconditioning with the organ care system lung: a single institution experience. Transpl Int. 2018.

- 11) Bonanno L, Pavan A, Dieci MV, Di Liso E, Schiavon M, Comacchio G, Attili I, Pasello G, **Calabrese F**, Rea F, Favaretto A, Rugge M, Guarneri V, Fassan M, Conte PF. *The role of immune microenvironment in small-cell lung cancer: Distribution of PD-L1 expression and prognostic role of FOXP3-positive tumour infiltrating lymphocytes.* Eur J Cancer. 2018;101:191-200
- 12) Schiavon M, Zampieri D, Marulli G, Verderi E, Rebusso A, Comacchio GM, Nicotra S, Loy M, Lunardi F, Feltracco P, **Calabrese F**, Cozzi E, Rea F. *Pushing the limits of reconditioning: extended normothermic lung perfusion in an extended criteria donor.* J Thorac Dis. 2018;10(12):E796-E801
- 13) Pezzuto F, Fortarezza F, Lunardi F, **Calabrese F**. *Are there any theranostic biomarkers in small cell lung carcinoma?* J Thorac Dis. 2019;11(Suppl 1):S102-S112
- 14) Pelosi G, Bianchi F, Hofman P, Pattini L, Ströbel P, **Calabrese F**, Naheed S, Holden C, Cave J, Bohnenberger H, Dinter H, Harari S, Albini A, Sonzogni A, Papotti M, Volante M, Ottensmeier CH. *Recent advances in the molecular landscape of lung neuroendocrine tumors.* Expert Rev Mol Diagn. 2019; 22:1-17.
- 15) Cocconcelli E, Balestro E, Biondini D, Barbiero G, Polverosi R, **Calabrese F**, Pezzuto F, Lacedonia D, Rea F, Schiavon M, Bazzan E, Foschino Barbaro MP, Turato G, Spagnolo P, Cosio MG, Saetta M. *High-Resolution Computed Tomography (HRCT) Reflects Disease Progression in Patients with Idiopathic Pulmonary Fibrosis (IPF): Relationship with Lung Pathology.* J Clin Med. 2019 Mar 22;8(3). pii: E399.
- 16) **Calabrese F**, Lunardi F, Pezzuto F, Fortarezza F, Vuljan SE, Marquette C, Hofman P. *Are There New Biomarkers in Tissue and Liquid Biopsies for the Early Detection of Non-Small Cell Lung Cancer?* J Clin Med. 2019 Mar 26;8(3). pii: E414
- 17) **Calabrese F**, Hirschi S, Neil D, Montero-Fernandez A, Timens W, Verbeken E, Chenard MP, Ivanovic M, Le Pavec J, Pena T, Dorfmueller P, Roux A, Rice A, Perissinotto E, Lunardi F, Levine DJ, Cozzi E, Goddard M. *Alveolar septal widening as an "alert" signal to look into lung antibody-mediated rejection: A multicenter pilot study.* Transplantation. 2019 Mar 1. doi: 10.
- 18) Verleden GM, Glanville AR, Lease ED, Fisher AJ, **Calabrese F**, Corris PA, Ensor CR, Gottlieb J, Hachem RR, Lama V, Martinu T, Neil DAH, Singer LG, Snell G, Vos R. *Chronic lung allograft dysfunction: Definition, diagnostic criteria, and approaches to treatment-A consensus report from the Pulmonary Council of the ISHLT.* J Heart Lung Transplant. 2019. pii: S1053-2498(19)31432-9.