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## 9° Giornata della Ricerca della Svizzera Italiana Venerdì 15 marzo 2019

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### Modulo per la sottomissione abstract ricerca di LABORATORIO

**Titolo** (massimo **15 parole**)

INTRA EPIDERMAL NERVE FIBER DENSITY AS A BIOMARKER OF PD PROGRESSION

**Autori** (cognome e iniziali, es: Grassi L.)

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**Testo** (massimo **250 parole**, preferibilmente in italiano (accettato anche in inglese), suddiviso in Introduzione, **Metodi**, **Risultati**, **Conclusioni** e **Finanziamento**)

Background: Small fiber neuropathy has been demonstrated in Parkinson's disease (PD) patients by skin biopsy.  $\alpha$ -Syn deposits have been detected by immunohistochemistry in cutaneous autonomic fibers in PD. The potential relationship between pathological  $\alpha$ -Syn deposits and the loss of small nerve fibers is still unclear.

Methods: We analysed three groups: PD, atypical parkinsonism (AP), controls (HC). The severity of disease was rated on clinical scales. Skin biopsies from ankle, thigh and neck were analysed by immunofluorescence with axonal marker PGP9.5 to assess intraepidermal nerve fiber density IENFD (N°fibers/mm). PGP9.5 was quantified also by WB for each subject at each anatomical site. PD patients underwent a 1 year follow-up skin biopsies.

Results: IENFD was significantly lower in PD group than HC and AP with possible tauopathies, but not than AP with possible synucleinopathies. IENFD was affected by gender: PD women had significantly lower IENFD values than PD men. On follow-up at 12 months, PD showed significantly lower IENFD at cervical site and thigh, but not at the ankle. Finally, intra-subject comparison of IENFD after 12 months, showed a significant worsening of denervation at the cervical site in patients with more disabling disease.

Conclusion: PD group shows skin denervation at all anatomical sites, and gender, disease duration and severity of disease affects denervation. Cervical skin denervation could be used as a biomarker of PD progression and can help in the differential diagnosis between PD and AP.

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**Visto superiore\*** (prego indicare **Nome e Cognome** del superiore) **\*campo obbligatorio**

Prof. Dr. Med. Alain Kaelin-Lang

**Criteria per sottomissione Abstract:**  
NO Case report  
NO Abstract senza nessun risultato  
VISTO da un superiore

**Invio Abstract**

