# A pilot open study to assess the efficacy and safety of ON-01910.Na (RGS) in patients with recessive dystrophic epidermolysis bullosa associated locally advanced / metastatic squamous cell carcinoma

Authors: Lauren Banner[1], Linda Hosler[1], Matthew Parris[2], Mark Gelder[2], Martin Laimer[3], Johann Bauer[3], Pranshu Sharma[4], Andrew South[1], Neda Nikbakht[1]

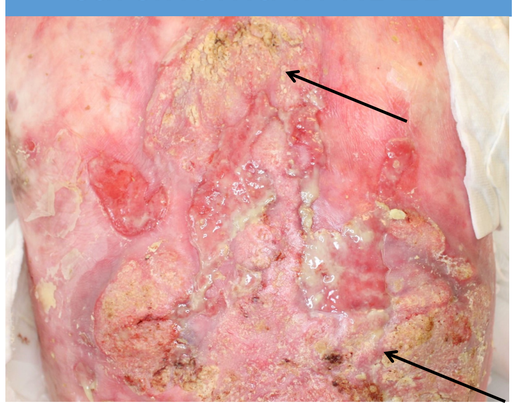
[1]Department of Dermatology and Cutaneous Biology, Thomas Jefferson University, Philadelphia, PA, USA
[2]Onconova Therapeutics, Newton, PA, USA
[3]Department of Dermatology and EB House, University Hospital Salzburg, Paracelsus Medical University Salzburg, Austria
[4]Department of Radiology, Thomas Jefferson University, Philadelphia, PA, USA

Background:

- Recessive dystrophic epidermolysis bullosa (RDEB) is an extremely rare genodermatosis caused by mutations in COL7A1
- Resultant lack of functional collagen VII manifests as severe skin and mucosal blistering in patients
- RDEB patients are at risk for aggressive cutaneous squamous cell carcinomas (cSCCs) arising from their chronic wounds
- cSCCs are the most common cause of death in RDEB
- There are limited effective treatment options for advanced RDEB-associated cSCCs that are metastatic or unresectable
- More safe and effective therapeutic modalities are needed for RDEB-associated SCCs.
- ON-01910.Na (RGS), a polo-like kinase inhibitor, has been matched as a promising therapeutic option in RDEB-associated SCCs

Skin blistering in RDEB

Squamous cell carcinoma in RDEB



Pre-clinical investigations:

- We previously demonstrated that RDEB SCC keratinocytes are *specifically* affected by polo-like kinase-1 (PLK-1) siRNA.
- ON-01910.Na, out of 8 screened PLK-1 inhibitors, demonstrated largest therapeutic window for distinguishing between tumor and normal cells
- Scan QR code for full publication by Atanasova et al, 2019)

Approach:

- Open-label, non-randomized phase 1/2 study

Objectives:

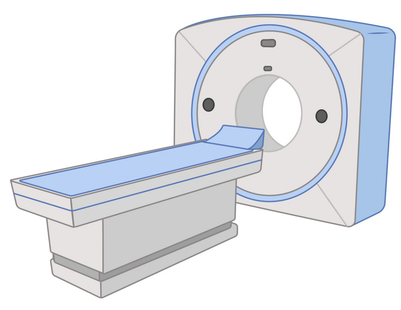
- To assess the safety and efficacy of oral and IV formulations of ON-01910.Na in patients with locally advanced or metastatic RDEB-associated SCC
- To collect pharmacokinetic data of ON-01910.Na from patient blood
- To complete biomarker analysis on patient tissue

Eligibility:

- Confirmed diagnosis of RDEB with histologic evidence of cSCC
- Failure to respond to standard of care including excision or systemic therapy
- No concomitant cancer therapies

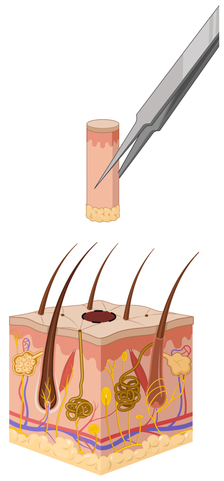
Outcome measures:

Clinical photos, cSCC tumor measurements



PET-CT images (RECIST 1.1)

PK analysis, Safety labs (CTCAE v5)



Biomarker analysis, Histology

Enrollment:

- 2/6 patients currently enrolled (USA)
- 2/12 patients currently enrolled (Austria)

**Sites currently enrolling:**

- *Thomas Jefferson University, USA*
  - ***NCT04177498***
- *EB House, Austria*
  - ***NCT03786237***

**Email:** Neda.nikbakht@jefferson.edu