Birt-Hogg-Dubé Newsletter

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You are receiving this email because you have expressed an interest in BHD. We hope you will enjoy this and future editions. If you do not wish to receive this newsletter, please see the end of the newsletter for instructions.

BHDSyndrome.org updates

More video interviews filmed at the Fourth BHD Symposium are now online. We are pleased to feature Professor Elizabeth Henske and Dr Doug Medvetz from Brigham and Women's Hospital in Boston, Massachusetts, as well as Dr Fred Menko, from the VU Medical Center in Amsterdam, the Netherlands. Do take some time to learn about their work and passion for finding a cure for BHD syndrome.

BHDSyndrome.org now includes a private Forum for individuals and families affected by BHD who would like to share their posts only with the BHD community. If you would like access to Living with BHD Syndrome – Private, please email contact@BHDSyndrome.org. Once you have been granted access, you will be able to log in and participate in the private Forum. All other Forum categories remain publically visible.

The BHD Literature Database has been redesigned in an Access format. The new format of the database allows more user-friendly navigation as well as greater functionality in cross-searching and comparing papers. Download the new BHD Literature Database here.

Fourth BHD Symposium

Abstracts from the Fourth BHD Symposium have been published in the journal *Familial Cancer* and are available here.

Additionally, Dr Vicki Colledge and Dr John Solly from the Myrovlytis Trust have written an article for the *Orphanet Journal of Rare Diseases* highlighting the value of bringing together the entire community of a rare disease (families, doctors and researchers) in regular meetings; they discussed the BHD Symposium as a case study. Read the article here.

Getting to know you

This quarter, meet Brenda, who was diagnosed with BHD syndrome in 2010, as well as Dr Laura Pradella, a post-doctoral researcher at the University of Bologna who is investigating tumour development in Cowden syndrome and BHD.

September 2012 marks three years since BHDSyndrome.org began featuring written interviews with people affected by BHD as well as doctors and researchers. We would like to warmly thank everyone who has given their time and graciously shared their lives with the BHD community. Please do have a look at our past interviews here.

BHD Research Highlights

Noteworthy papers from the last quarter include:

BASIC:

Nahorski *et al*, 2012. Folliculin interacts with p0071 (Plakophilin-4) and deficiency is associated with disordered RhoA signalling, epithelial polarization and cytokinesis. *Hum Mol Genet*. 2012 Sep 10. [Epub ahead of print]

- The authors identified p0071 (Plakophilin-4) as a putative novel Folliculin-interacting partner, and performed co-immunoprecipitation and colocalisation studies to analyse the interaction. p0071 is linked with RhoA signalling, and further investigations suggested that Folliculin is associated with RhoA signalling, cytokinesis and intercellular junction formation. This paper provides a significant step towards deciphering the function of Folliculin.

Nookala *et al*, 2012. Crystal structure of folliculin reveals a hidDENN function in genetically inherited renal cancer. *Open Biol 2: 120071.* (Free full text)

- Nookala *et al*. presented the crystal structure of the C-terminal domain of Folliculin. The authors identified that Folliculin appears to be related to differentially expressed in normal cells and neoplasia (DENN) domain proteins. As DENN domain proteins are Rab guanine nucleotide exchange factors (GEFs), further examination showed that Folliculin also has GEF activity. The results from Nookala *et al*. are a milestone in the BHD research field.

CLINICAL:

Michels *et al*., 2012. Pneumomediastinum and striking family history: uncommon case of Birt-Hogg-Dubé syndrome. *Intern Med. 2012;51(15):2007-9. Epub 2012 Aug 1.* (Free full text)

- The authors reported the case of a young man who presented with pneumomediastinum and cervicofacial emphysema, a personal history of smoking, as well as a family history of pneumothorax and undefined lung abnormalities. The young man was tested for BHD and found to carry a mutation in *FLCN*. Michels *et al*. noted that pulmonary symptoms of BHD may not be limited to pneumothorax and cysts, but may also include pneumomediastinum and cervicofacial emphysema.

Kashiwada *et al*., 2012. Birt-hogg-dubé syndrome and familial adenomatous polyposis: an association or a coincidence? *Intern Med. 2012;51(13):1789-92.* Epub 2012 Jul 1. (Free full text)

- Kashiwada *et al.* reported the case of a 60-year-old female found to have a mutation in the *FLCN* gene as well as in the *adenomatous polyposis coli* (*APC*) gene. She presented with facial papules, a history of colon cancer at 28 years of age, a history of recurrent pneumothorax and lung cysts. The authors questioned whether the concurrent *FLCN* mutation may have contributed to the development of colon cancer.

Ponti *et al*., 2012. Cancer-associated genodermatoses: Skin neoplasms as clues to hereditary tumor syndromes. *Crit Rev Oncol Hematol.* 2012 Jul 21. [Epub ahead of print]

- Ponti *et al.* reviewed the importance of recognising that dermatologic conditions may be signs of an underlying hereditary tumour syndrome. The authors discussed the current research into the aetiology, pathogenesis and therapies for a number of syndromes including BHD, hereditary leiomyomatosis and renal cell carcinoma (HLRCC) and Cowden syndrome.

To participate in an interview feature, submit information or suggest a topic for the next newsletter, please contact us at contact@BHDSyndrome.org.

BHD foundation