



HGNC Newsletter Autumn 2011

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There are currently 32336 approved symbols

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New Gene Family Resources

Our gene family resource continues to expand. Here is a list of the new family pages that have been added recently:

[Beta-galactoside-binding lectins](#)

[BPI fold containing](#)

[Heat shock proteins](#) - includes the following subgroups: [HSP70](#), [DNAJ \(HSP40\)](#), [HSPB \(small heat shock proteins\)](#), [HSPC \(HSP90\)](#) and [Chaperonins](#)

[Myosin binding proteins](#)

[MOB kinase activators](#)

[Rho guanine nucleotide exchange factors](#)

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[Short chain dehydrogenase/reductase superfamily](#)

[SKI transcriptional corepressors](#)

[StAR-related lipid transfer \(START\) domain containing](#)

[Transglutaminases](#)

[Tropomyosins](#)

Naming 'oncogenes'

We are aware that the term "oncogene" appears in different formats in our gene names and we would like to standardise our use of this term. Here are examples of the different formats that we have currently:

- "v-abl Abelson murine leukemia viral **oncogene** homolog 2" ([ABL2](#))
- "c-ros **oncogene** 1, receptor tyrosine kinase" ([ROS1](#))
- "jun **proto-oncogene**" ([JUN](#))

Of the following four options, we would like to know which you would find most appropriate for use in human gene names:

1. v-[x] viral oncogene homolog
2. c-[x] oncogene
3. c-[x] proto-oncogene
4. [x] proto-oncogene

Please contact us at hgnc@genenames.org with your opinion.

Gene Symbols in the News

There have been a number of reports in the international media that include approved gene symbols over the last few months. There have been several reports of new links between certain genes and types of cancer: mutations in the [STAG2](#) gene have been [linked with three different types of cancer](#) (melanoma, Ewing's sarcoma and glioblastomas), while a mutation of the [CASP8](#) gene has also been [linked to melanoma](#). A new report showed that women carrying mutated copies of the [RAD51D](#) gene have an [increased risk of ovarian cancer](#), while variants in the following five genes were [linked to aggressive forms of prostate cancer](#): [LEPR](#), [RNASEL](#), [IL4](#), [CRY1](#) and [ARVCF](#).

There have also been several reports on links between genes and particular disorders. A study on a Swiss family with a rare condition called adermatoglyphia, which results in a lack of epidermal ridges including fingerprints, has shown that [these patients carry a mutation](#) in the [SMARCAD1](#) gene. Mutations in the [AKT2](#) gene have been shown to [cause a severe form of hypoglycaemia](#). The [SGK1](#) gene has been reported as playing [an important role in female reproductive success](#); women with unexplained fertility have high levels of endometrial SGK1, while blocking the [SGK1](#) ortholog in mice resulted in smaller litter size, consistent with spontaneous fetal loss.

Finally, blocking the activity of the [HCN2](#) gene product may [relieve chronic pain](#). When researchers deleted the ortholog of the human [HCN2](#) gene in mice, the animals were unable to feel neuropathic pain but were still sensitive to acute pain.

Meeting News

Matt and Elspeth attended the Theo Murphy International Scientific meeting on [Non-protein coding RNAs](#), hosted by the Royal Society, from 19th-20th September in Newport Pagnell, U.K. Matt gave an invited talk on the nomenclature of long non-coding RNAs, which was followed by a fruitful discussion.

Elspeth, Matt and Ruth attended the [ICHG 2011/ASHG 61st Annual Meeting](#) in Montreal, Canada from 11th-15th October and presented a poster on our work on gene families. They were all very impressed by the high usage of approved nomenclature at this meeting, both by poster presenters and those giving talks.

Publications

1. Bingle CD, Seal RL, Craven CJ. **Systematic nomenclature for the PLUNC/PSP/BSP30/SMGB proteins as a subfamily of the BPI fold-containing superfamily**. *Biochem Soc Trans*. 2011 Aug 1;39(4):977-83. PMID:[21787333](#).

The above publication describes how and why a new nomenclature was developed for the [BPIF family](#). The new system arose from discussions that started during a session at the 'Proteins with a BPI/LBP/PLUNC-like Domain: Revisiting the Old and Characterizing the New' meeting held in Nottingham, U.K. back in January.

Agreement was reached on the BPIF root symbol and the nomenclature has been adopted by communities working on family members from several different vertebrate organisms, in addition to those working on the human and rodent genes. We hope to continue working with researchers from across the vertebrate organism research community in any future efforts to standardise the nomenclature of gene families.

2. Bateman A, Agrawal S, Birney E, Bruford EA, Bujnicki JM, Cochrane G, Cole JR, Dinger ME, Enright AJ, Gardner PP, Gautheret D, Griffiths-Jones S, Harrow J, Herrero J, Holmes IH, Huang HD, Kelly KA, Kersey P, Kozomara A, Lowe TM, Marz M, Moxon S, Pruitt KD, Samuelsson T, Stadler PF, Vilella AJ, Vogel JH, Williams KP, Wright MW, Zwieb C. **RNAcentral: A vision for an international database of RNA sequences**. *RNA*. 2011 Sep 22. PMID:[21940779](#)

This paper describes plans for a much-needed international RNA sequence database. The HGNC looks forward to contributing data to this valuable resource.

So long, and thanks for all the fish

After 11 years working with the HGNC, Michael has recently left the HGNC and moved on to pastures new. We wish him all the best in his new job at Strangeways Research Laboratory, Cambridge.

If you would like to be added to our HGNC Newsletter mailing list or if you have questions or comments on any human gene nomenclature issue, please email us at: hgnc@genenames.org

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