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Trichinellosis is a food-borne parasitic zoonosis caused by nematodes of the genus *Trichinella*. Twelve genotypes of *Trichinella* have been identified worldwide, four of which are confirmed to exist in Europe: *T. spiralis, T. nativa, T. britovi* and *T. pseudospiralis.* Until 2012, in Poland, only two *Trichinella* species were known to be etiological agents of disease among domestic animals and wildlife including *T. spiralis* and *T. britovi*. However, in the last year during various epidemiological surveys, two additional species *T. pseudospiralis* and *T. nativa* have been identified in wild animals.

T. spiralis is considered as an etiological agent of the most human infections and deaths caused by trichinellosis globally, although other species can cause human infections, including *T. britovi.*

The significant increase wild boars population, the high prevalence of wild boars infected with *T. britovi,* consumption of wild boars meet instated of pork, and the low sensitivity of the methods recommended for *Trichinella* spp. detection in muscle samples show an urgent need to identify *Trichinella* antigens, which may help to determine candidates for the species-specific diagnostics.

In the present study we will apply the proteomics approach to define antigenic characteristic of the *T. britovi* antigens. We expect that obtained results will reveal the differences and similarities in the protein profiles of all analysed *T. britovi* stages. Additionally, the Western Blot method will be used to confirm if any of the proteins identify for *T. britovi* stimulate immune system of host and if the proteins are present in all developmental stages. Thus, indication of the immunoreactive proteins in all developmental stages of *T. britovi* will be useful for specific diagnostics. Moreover, the use of these immunoreactive proteins in recombinant form may provide a new source of diagnostic reagents and more reliable results when making a diagnosis of trichinellosis. The immune response and protective immunity induced in mice by vaccination with these recombinant proteins will be assessed.