formetanate and for meningiomas from 1.51 for carbaryl to 3.67 for thiofanox.

Conclusions Findings reinforce carcinogenicity evidence for already suspected active ingredients and draw attention to additional active ingredients, notably used on fruit trees, vineyards, potatoes and beets.

02A.5 AGRICULTURAL EXPOSURES AND RISK OF NHLs, BY SUBTYPES: RESULTS FROM THE AGRICULTURE AND CANCER (AGRICAN) COHORT

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Purpose Several studies and meta-analyses demonstrated that farmers have an excess risk of Non-Hodgkin Lymphomas (NHL), including Multiple Myeloma (MM). It has been suggested that pesticides could explain these results. Therefore circumstances of pesticide exposures (on crops, seeds or animals) and other farming tasks need to be explored in relation to NHL risk overall and major subtypes. From the large cohort of French farmers AGRICAN, we assessed the risk of NHL by subtypes (1) compared to the general population and (2) among farmers to identify the farm activities and tasks linked to NHLs subtypes.

Methods AGRICAN cohort enrolled more than 1 80 000 adults registered with the Mutualité Sociale Agricole, from 11 areas. Incident NHLs cases were identified by individual cross linkage with cancer registries from enrolment (2005–2007) to 2013. Lifetime work on 13 crops and 5 types of animals and the tasks performed (with duration and size information) were collected by enrollment questionnaire. Standardized incidence ratios (SIR) were calculated. Associations between NHLs and crops, animals and specific tasks were analyzed using Cox models.

Results 1,133 NHL incident cases were identified (269 MM, 244 chronic lymphocytic leukemia and small lymphocytic lymphoma (CLL-SLL), and 190 diffuse large B-cell lymphoma (DLBCL)). Increased risks were observed for NHL overall and MM (SIR=1.05, and SIR=1.23, respectively). Positive associations were observed with exposure to pesticides i) on crops: DLBCL (grassland), MM (corn, wheat/barley and potato), CLL-SLL (corn, wheat/barley and vineyard) and DLBCL (tobacco), ii) in seed treatment: in CLL-SLL (sunflower, wheat/barley) and in MM (wheat/barley, corn) and iii) for use on animals (MM). Other tasks were linked to NHL risk: hay making (LDGCB) and harvesting corn (MM) and wheat/barley (CLL-SLL).

Conclusion Our results supports the role of pesticide exposure on NHL risk, not only on crops. Moreover, specific associations according to NHLs subtypes were observed.

Workplace Bullying/Stress

02B.1 WHAT PSYCHOSOCIAL FACTORS AT WORK ARE ASSOCIATED TO WORKPLACE BULLYING? A STUDY WITH JUDICIARY BRAZILIAN CIVIL SERVANTS FROM SOUTHERN BRAZIL

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Introduction Workplace bullying has been currently described as one of the main psychosocial factors at work, with negative impact on health. Its causes and antecedents have been increasingly discussed by researchers, although there is still a lack of epidemiological evidence on the phenomenon. Therefore we aimed to evaluate the association between other psychosocial factors at work and bullying in a sample of Judiciary Brazilian Civil Servants.

Methods Cross-sectional study with a sample of 1667 workers from the Federal Judiciary in southern Brazil. We used the Psychosocial Safety Climate Scale (PSC-12), the Job Stress Scale (JSS) and the Effort-Reward Imbalance Scale (ERI) in order to evaluate psychosocial antecedents of bullying at work. The Negative Acts Questionnaire (NAQ-r) was used to measure bullying. Poisson regression was used to test associations between bullying and psychosocial factors.

Results The overall prevalence of bullying (exposure to a weekly negative act) was 17.7%. High risk Psychosocial Safety Climate, High Job Strain and High Effort-Reward Imbalance increased the prevalence of bullying in 3.14 (CI 2.20–4.49), 5.68 (CI 3.86–8.35) and 4.12 (3.05–5.57) times, respectively. The Poisson Regression model including all psychosocial risks showed that all psychosocial factors were strongly and independently associated with bullying ($p < 0.001$). High risk psychosocial safety climate was associated with a 82% higher prevalence of bullying, while high job strain and high effort-reward imbalance were associated with a 172% and 140%, respectively, higher prevalence of bullying.

Discussion These findings corroborate the hypothesis that social and organizational factors at work are key determinants of workplace bullying. Interventions to target bullying and protect workers health should focus on work organization and work processes.

02B.2 RISK FACTORS FOR WORKPLACE BULLYING: A SYSTEMATIC REVIEW

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Introduction Workplace bullying has a high prevalence in organisations and is associated to several health problems. However compiled information on its risk factors remains a gap in the literature. Thus this study aimed to systematically review risk factors for workplace bullying in an epidemiological approach.