

# Kateřina Breiterov, M.Sc.

## Personal data

*Date and place of birth* 5. 3. 1991, Prague  
*Address* Dobřichovick 747, 252 28 ernořice, Czech Republic  
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## Present position

Since 2017 Assistant at the Department of the Pharmaceutical Botany, Charles University, Faculty of Pharmacy in Hradec Krlov, Czech Republic

## Education

2010 - 2015 Charles University, Faculty of Pharmacy in Hradec Krlov, Czech Republic  
Thesis: *Neurotropic and antioxidative activity of some selected species of monocotyledonous alkaloidal plants in vitro. VIII.*  
Supervisor: Assoc. prof. Lucie Cahlkov, Ph.D.

since 2015 Charles University, Faculty of Pharmacy in Hradec Krlov, Czech Republic  
Thesis theme: *Alkaloids of the Amaryllidaceae family as potential drugs in therapy of civilization diseases.*  
Supervisor: Assoc. prof. Lucie Cahlkov, Ph.D.

## Research interests

- Secondary metabolites of Amaryllidaceae family (analysis, isolation, structure identification)
- GC-MS analysis of bioactive compounds
- biological activity of secondary metabolites (AChE, BuChE, POP, BACE-1, AKR1C3 inhibition; antimicrobial activity, antineoplastic activity, antimalarial activity)

## Publications

Chlebek J, Doskoil I, Hulcov D, [Breiterov K](#), řafratov M, Havelek R, Habartov K, Hořtalkov A, Volřtatov T, Cahlkov L. (2016) Cytotoxicity of Naturally Occurring Isoquinoline Alkaloids of Different Structural Types. *Natural Product Communications*, **11**, 753-756. (IF2015 0.884)

Hulcov D., [Breiterov K](#)., Zemanov L., řafratov M., Vanekkov N., Hořtalkov A., Wsl V., Cahlkov L. (2017) Screening of AKR1C3 inhibitory potency of naturally occurring Amaryllidaceae alkaloids of different structural types. *Natural Product Communications*, **12**, 245-246. (IF=0.902)

Šafratová M., Hošťálková A., Hulcová D., Breiterová K., Hrabcová V., Machado M., Fontinha D., Prudêncio M., Kuneš J., Chlebek J., Jun D., Hrabínová M., Nováková L., Havelek R., Seifrtová M., Opletal L., Cahlíková L. (2017) Alkaloids from *Narcissus poeticus* cv. Pink Parasol of various structural types and their biological activity. Archives of Pharmacal Research, in press (IF=2.242).

Hulcová D., Breiterová K., Klímová K., Šafratová M., Hošťálková A, Simone A. de, Andrisano V., Davani L., Opletal L., Cahlíková L. Amaryllidaceae Alkaloids as Potential Glycogen Synthase Kinase-3 $\beta$  Inhibitors, Phytomedicine, submitted manuscript (IF=3.526).

## Scientific activities

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|------|--|
| 2014 | <ul style="list-style-type: none"><li>• XXII. Students' Science Conference, Faculty of Pharmacy, Hradec Králové, Czech Republic; 16. 4. (Short presentation: Alkaloids and biological activity of selected <i>Galanthus</i>, <i>Leucojum</i> and <i>Narcissus</i> species)</li><li>• Member of student part of Academic Senate of Faculty of Pharmacy, Charles University (April 2014 – January 2015)</li><li>• Co-author of book (AUBRECHT, Radek, et al. <i>Německy mluvící Praha: galerie osobností</i>. Praha: Gymnázium Na Zatlance, 2014, 266 s. ISBN 978-80-254-9582-7.)</li><li>• Internship in Tartu Ülikooli Kesklinna Apteek, Tartu, Estonia (three weeks)</li></ul>  |
| 2015 | <ul style="list-style-type: none"><li>• XXIII. Students' Science Conference, Faculty of Pharmacy, Hradec Králové, Czech Republic; 22. – 23. 4. (Short presentation: Alkaloids of selected <i>Galanthus</i>, <i>Leucojum</i> and <i>Narcissus</i> species and their biological activity)</li></ul>  |
| 2016 | <ul style="list-style-type: none"><li>• 6<sup>th</sup> Postgraduate and 4<sup>th</sup> Postdoc conference, Faculty of Pharmacy, Hradec Králové, Czech Republic; 9. – 10. 2. (Short presentation: Alkaloids from <i>Narcissus</i> cv. PROFESSOR EINSTEIN (<i>Amaryllidaceae</i>) – isolation and biological activity)</li><li>• Synthesis and Analysis of Drugs conference in Hradec Králové, Czech Republic; 22. – 24. 6. (poster)</li><li>• Conference Trends in Natural Products Research: A Young Scientists' Meeting of PSE and IUNG-PIB v Pulawy, Poland; 30. 5. – 2. 6. (Short presentation: Alkaloids from <i>Narcissus</i> cv. PROFESSOR EINSTEIN (<i>Amaryllidaceae</i>) – isolation and biological activity – rewarded by The Teva Award for Best Oral Presentation)</li></ul> |
| 2017 | <ul style="list-style-type: none"><li>• 7<sup>th</sup> Postgraduate and 5<sup>th</sup> Postdoc conference, Faculty of Pharmacy, Hradec Králové, Czech Republic; (Short presentation: Alkaloids from <i>Narcissus</i> cv. PROFESSOR EINSTEIN (<i>Amaryllidaceae</i>) – isolation and biological activity)</li><li>• 4<sup>th</sup> Meeting on Biotechnology of Plant Products, Green for Good IV – G4G, Olomouc, Czech Republic. (Flash poster: Isolation and Biological Activities Of Alkaloids From <i>Narcissus</i> cv. PROFESSOR EINSTEIN)</li><li>• PSE Young Scientists' Meeting: Natural Products in Health, Agro-Food and Cosmetics, Lille, France. (Poster: Isolation and Biological Activities Of Alkaloids From <i>Narcissus</i> cv. PROFESSOR EINSTEIN)</li></ul>             |

## **Professional membership**

since 2016                      Phytochemical Society of Europe

## **Teaching activities**

since 2016                      Pharmaceutical botany (practical classes)

since 2016                      Recognising of medicinal plants (practical classes)

since 2017                      Phytochemical methods (practical classes, CZE + ENG)

4. 1. 2018

Kateřina Breiterová, M.Sc.