

EXPERT PANEL FOR FRAGRANCE SAFETY MEETING

Minutes

January 22-24, 2018

EXPERT PANEL MEMBERS		RIFM STAFF	GUESTS
Donald Belsito (Chair) Magnus Bruze G. Allen Burten, Jr. Jochen Buschmann Maria Dagli Wolfgang Dekant	Allison Fryer Daniel Liebler Trevor Penning Terry Schultz I Glenn Sipes (Vice Chair) Y. Tokura	Anne Marie Api Danielle Botelho Mihir Date Stephanie La Cava Aurelia Lapczynski Jim Romine	Tobey Marzouk (1/22, 1/23 half day only)

1) Discussion of the Meeting Schedule and Agenda Topics

a) Completion/Signing of Conflict of Interest Statement

Dr. Belsito opened the meeting. The Conflict of Interest Statement was signed.

2) Minutes

The September 2017 Expert Panel Meeting minutes were approved.

3) Follow-Up and Informational Items

a) Follow-Up List

Dr. Api reviewed the status of the items on the follow-up list; all items are either in progress and will be discussed later in the meeting or have been completed.

4) Standing Items (For Expert Panel information only; per Panel's request)

a) RIFM Publications

Dr. Api reviewed the RIFM publication list with the Panel. This is a standing item on the agenda, which provides a summary of all RIFM recent publications.

5) Presentation and Demonstration of Summary Table

a) Safety Assessment Overview (152 Safety Assessments covering 202 materials)

b) General Comments

i) Review spreadsheets

Ms. S. LaCava reviewed the use of the overall spreadsheet and addressed any other questions the Panel had about the use of the spreadsheet or any improvements needed.

ii) A. Patel's spreadsheet was very useful would like to have that continue

iii) For the Literature search section- keep the links and add a date as to when it was last accessed.

6) Review Safety Assessments Batch 1

CAS#	Material Name	Tab	Status
3452-97-9	3,5,5-Trimethyl-1-hexanol	Tab 16	Approved with changes
5986-38-9	Ocimenol	Tab 17	Approved with changes
103614-86-4	1-Naphthalenol, 1,2,3,4,4a,5,8,8a-octahydro-2,2,6,8-tetramethyl-	Tab 18	Approved
28462-85-3	endo-1,2,3,3-Tetramethylbicyclo[2.2.1]heptan-2-ol	Tab 19	Approved
41199-19-3, 71832-76-3, 643-53-8 and 670-24-6	1,2,3,4,4a,5,6,7-Octahydro-2,5,5-trimethyl-2-naphthalenol	Tab 20	Approved
83926-73-2	4-Cyclohexyl-2-methyl-2-butanol	Tab 21	Approved
26160-83-8, 26896-48-0	Bis(hydroxymethyl)tricyclo[5.2.1.0 ^{2,6}]decane	Tab 22	Approved
16491-36-4	cis-3-Hexenyl butyrate	Tab 23	Insufficient data; skin sensitization
33467-73-1 and 56922-80-6	cis-3-Hexenyl formate	Tab 24	Insufficient data; skin sensitization
1708-82-3, 3681-82-1 and 3681-71-8	Hex-3-enyl acetate	Tab 25	Insufficient data; skin sensitization
33467-74-2	cis-3-Hexenyl propionate	Tab 26	Insufficient data; skin sensitization
31501-11-8	cis-3-Hexenyl hexanoate	Tab 27	Insufficient data; skin sensitization
76238-22-7	(Z)-Non-6-enyl acetate	Tab 28	Insufficient data; skin sensitization
41519-23-7	cis-3-Hexenyl isobutyrate	Tab 29	Insufficient data; skin sensitization
10094-41-4 and 53398-85-9	(Z)-Hex-3-enyl 2-methylbutyrate	Tab 30	Insufficient data; skin sensitization
68555-65-7 and 67674-47-9	(E,Z)-2,6-Nonadien-1-ol acetate	Tab 31	Approved
91482-37-0, 3239-35-8, 3239-37-0	(E)-6,10-Dimethylundeca-5,9-dien-2-yl acetate	Tab 32	Approved
106-29-6 and 999-40-6	Geranyl butyrate	Tab 33	Approved
105-86-2 and 2142-94-1	Geranyl Formate	Tab 34	Approved
105-90-8 and 105-91-9	Geranyl propionate	Tab 35	Approved
29548-30-9	Farnesyl acetate	Tab 36	Approved
105-87-3 and 141-12-8	Geranyl acetate	Tab 37	Approved
50816-18-7	9-Decenyl acetate	Tab 38	Approved
68141-27-5	10-Undecenoic acid, heptyl ester	Tab 39	Approved
80118-06-5	1,3-Dimethylbut-3-enyl isobutyrate	Tab 40	Approved

CAS#	Material Name	Tab	Status
68844-96-2	1,3-Benzodioxole-5-propanol, alpha-methyl-, 5-acetate	Tab 41	Approved
120-45-6	alpha-Methylbenzyl propionate	Tab 42	Approved with changes
7775-39-5	alpha-Methylbenzyl isobutyrate	Tab 43	Approved with changes
629-33-4	Hexyl formate	Tab 44	Approved
142-92-7	Hexyl acetate	Tab 45	Approved
2445-76-3	Hexyl propionate	Tab 46	Approved
2639-63-6	butanoic acid	Tab 47	Approved
112-06-1	Heptyl acetate	Tab 48	Approved with changes
112-32-3	Octyl formate	Tab 49	Approved
112-14-1	Octyl acetate	Tab 50	Approved
110-39-4	Octyl butyrate	Tab 51	Approved
143-13-5	Nonyl acetate	Tab 52	Approved
112-17-4	Decyl acetate	Tab 53	Approved
112-66-3	Lauryl acetate	Tab 54	Approved
10250-45-0	4-Heptanol, 2,6-dimethyl-,acetate	Tab 55	Approved with changes
4864-61-3	3-Octyl acetate	Tab 56	Approved
142-09-6	Hexyl methacrylate	Tab 57	Approved
61931-81-5	cis-3-Hexenyl lactate	Tab 58	Insufficient data; genotoxicity
20962-70-3	4-Pentenoic acid, 2-acetyl-4-methyl-, ethyl ester	Tab 59	Approved
64001-15-6	Tricyclodecanyl acetate	Tab 60	Approved with changes
72183-75-6	1-Methyl-2-(1-methylpropyl)cyclohexyl acetate	Tab 61	Approved
42288-75-5	Cyclohexyl phenylacetate	Tab 62	Approved with changes
122760-84-3	Tricyclo[3.3.1.1.(3.7)]decan-2-ol, 4-methyl-8-methylene-	Tab 63	Approved
63500-71-0, 65418-69-1 (cis), 65418-70-4 (trans)	2-Isobutyl-4-methyltetrahydro-2H-pyran-4-ol	Tab 64	Approved
8007-35-0, 80-26-2 and 7785-54-8	Terpinyl acetate (Isomer mixture)	Tab 65	Approved
58985-18-5 and 80-25-1	Dihydroterpinyl acetate	Tab 66	Approved
80-27-3	Terpinyl propionate	Tab 67	Approved
2153-28-8	Terpinyl butyrate	Tab 68	Approved
2153-26-6	Terpinyl formate	Tab 69	Approved
7774-65-4	Terpinyl isobutyrate	Tab 70	Approved

7) RIFM Safety Evaluation Process

a) Presentation RIFM Safety Assessment Update and Metrics

Dr. Romine provided an update on the RIFM Safety Assessment program (see Attachment 01).

b) Presentation on Low Exposure Materials

Dr. Api presented an approach to conducting safety assessments for low exposure synthetic fragrance materials (see Attachment 02).

8) Introduction to Safety Assessment approach to Naturals Complex Substances (webinar)

The RIFM staff provided an introduction on how to approach safety assessments for Natural Complex Substances (NCSs). Those staff members not present at the meeting gave their presentations via webinar. The first presentation was an introduction given by Dr. Salvito (see Attachment 03). This was followed by presentations from Dr. Date (see Attachment 04), Ms. Lapczynski (see Attachment 05), Dr. Botelho (see Attachment 06), Ms. Ritacco (see Attachment 07), Mr. Thakkar (see Attachment 08), Ms. Tsang (see Attachment 09) and Dr. Parakhia (see Attachment 10).

Dr. Date spoke on ways to group various naturals and using read across for components of NCSs. The other staff members discussed approaches to the various endpoints – Ms. Lapczynski presented on the environmental endpoints, Dr. Botelho presented on the respiratory endpoint, Ms. Ritacco presented on phototoxicity/photoallergy endpoints, Mr. Thakkar presented on the genotoxicity endpoints, Ms. Tsang presented the repeat dose, developmental and reproduction endpoints, and Dr. Parakhia presented on the skin sensitization endpoint.

9) Review Safety Assessments Batch 2

CAS#	Material Name	Tab	Status
87731-18-8, 84681-92-5	Cyclooct-4-en-1-yl methyl carbonate	Tab 72	Approved
105-53-3	Diethyl malonate	Tab 73	Approved
10031-87-5	2-Ethylbutyl acetate	Tab 74	Approved
103-09-3	2-Ethylhexyl acetate	Tab 75	Approved
90397-38-9	2-Methylpentyl 2-methylvalerate	Tab 76	Approved
134-28-1	Guaiyl acetate	Tab 77	Approved
67674-46-8	6,6-Dimethoxy-2,5,5-trimethylhex-2-ene	Tab 78	Approved with changes
97358-54-8, 97358-55-9	(E)-1-(1-Methoxypropoxy)hex-3-ene	Tab 79	Approved with changes
28069-74-1	Acetaldehyde ethyl cis-3-hexenyl acetal	Tab 80	Approved with changes
63449-64-9	(Z,Z)-1,1'-[Ethylidenebis(oxy)]di(hex-3-ene)	Tab 81	Approved with changes
589-38-8	3-Hexanone	Tab 82	Approved with changes
123-19-3	4-Heptanone	Tab 83	Approved with changes
110-43-0	2-Heptanone	Tab 84	Approved with changes
106-35-4	3-Heptanone	Tab 85	Approved with changes
111-13-7	2-Octanone	Tab 86	Approved with changes
106-68-3	3-Octanone	Tab 87	Approved with changes
112-12-9	2-Undecanone	Tab 88	Approved with changes
593-08-8	2-Tridecanone	Tab 89	Approved with changes
2345-28-0	2-Pentadecanone	Tab 90	Approved with changes
564-94-3	2-Formyl-6,6-dimethylbicyclo(3.1.1)hept-2-ene	Tab 91	Approved
30772-79-3	Octahydro-4,7-methano-1H-indenecarbaldehyde	Tab 92	Approved
123-05-7	2-Ethylhexanal	Tab 93	Approved
7786-29-0	2-Methyloctanal	Tab 94	Approved
5435-64-3	3,5,5-Trimethylhexanal	Tab 95	Approved

CAS#	Material Name	Tab	Status
19009-56-4	2-Methyldecanal	Tab 96	Approved
110-41-8	2-Methylundecanal	Tab 97	Approved
68141-14-0	Nonanal, 5-ethyl-2-methyl-	Tab 98	Approved
107-75-5	Hydroxycitronellal	Tab 99	Approved; waiting for BASF data
62439-41-2	6-Methoxy-2,6-dimethylheptan-1-al	Tab 100	Approved
3613-30-7	Methoxycitronellal	Tab 101	Approved
1128-08-1	3-Methyl-2-(n-pentanyl)-2-cyclopenten-1-one	Tab 102	Insufficient data; skin sensitization
488-10-8 and 6261-18-3	cis-Jasmone	Tab 103	Insufficient data; skin sensitization
11050-62-7	Isojasmone	Tab 104	Insufficient data; skin sensitization
95962-14-4	2-(p-Menth-1-ene-10-yl)cyclopentanone	Tab 105	Approved
68845-36-3, 17369-60-7, 39121-42-1, 39121-44-3	2-Cyclohexen-1-one, 3,5-diethyl-5,6-dimethyl-	Tab 106	Approved
89-81-6, 4573-50-6, 6091-50-5	Piperitone	Tab 107	Approved
16429-07-5	2-Hexylidenecyclohexan-1-one	Tab 108	Approved
84642-57-9	2-[(3,3,5-Trimethylcyclohexyl)acetyl]cyclopentan-1-one	Tab 109	Approved
13380-94-4	Tricyclo[5.2.1.02,6]decan-8-one	Tab 110	Approved with changes
41724-19-0	Octahydro-7-methyl-1,4-methanonaphthalen-6(2H)-one	Tab 111	Approved with changes
51519-65-4	4,4a,6,7,8,8a-Hexahydro-1,4-methanonaphthalen-5(1H)-one	Tab 112	Approved
22690-27-3	1,2,3,4,5,6,7,8,9,10-Decahydro-5,9-methanobenzocycloocten-11-one	Tab 113	Approved
65405-72-3	1,2,3,4,4a,7,8,8a-Octahydro-2,4a,5,8a-tetramethyl-1-naphthyl formate	Tab 114	Approved
5413-60-5, 54830-99-8, 2500-83-6	Acetoxidyhydrodicyclopentadiene (Mixture of Isomers)	Tab 115	Approved
17511-60-3, 68912-13-0, 67634-24-6	Tricyclodecanyl propionate	Tab 116	Approved
113889-23-9	Butanoic acid, 3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-indenyl ester	Tab 117	Approved
67634-20-2, 68039-39-4	3a,4,5,6,7,7a-Hexahydro-4,7-methano-1H-inden-5-yl isobutyrate	Tab 118	Approved
68039-45-2, 68039-44-1	3a,4,5,6,7,7a-Hexahydro-4,7-methano-1H-inden-6-yl pivalate	Tab 119	Approved
58096-47-2	3a,7-Methano-3aH-cyclopentacycloocten-3-ol, decahydro-1,1,7-trimethyl-, formate	Tab 120	Approved
20009-20-5	Cyclohexanemethanol, 4-(acetyloxy)-a,a,4-trimethyl-, acetate	Tab 121	Approved

CAS#	Material Name	Tab	Status
72903-27-6	Diethyl 1,4-cyclohexane dicarboxylate	Tab 122	Approved with changes
58567-11-6	Formaldehyde cyclododecyl ethyl acetal	Tab 123	Approved
338735-71-0, 35143-77-6 (mixture)	8H-Indeno(4,5-B)furan,2,3,3a,4,5,5a,6,7,8a,9-decahydro-2,6,6,7,8,8-hexamethyl Mixture of isomers	Tab 124	Approved
476332-65-7, 647828-16-8 (mixture)	2H-Indeno[4,5b]furan, decahydro-2,2,6,6,7,8,8-heptamethyl and Indeno[4,3a-b]furan,decahydro-2,2,7,7,8,9,9-heptamethyl-	Tab 125	Approved
6790-58-5, 3738-00-9	Naphtho[2,1-b]furan, dodecahydro-3a,6,6,9a-tetramethyl-, (3aR,5aS,9aS,9bR)-	Tab 126	Approved
7158-25-0	3a,4,4a,5,8,8a,9,9a-Octahydro-4,9:5,8-dimethano-1H-benz[f]indene	Tab 127	Approved
7/3/4630	Valencene	Tab 128	Approved
87-44-5	β -Caryophyllene	Tab 129	Approved with changes
673-84-7, 3016-19-1 (mixture)	2,6-Dimethylocta-2,4,6-triene	Tab 130	Approved

10) Presentation on Chemical Grouping and Read Across by M. Date

Dr. Date gave a presentation on chemical grouping and its impact on read across (see Attachment 11).

11) Presentation by A. Lapczynski – Update on Environmental Research Projects

Ms. Lapczynski gave an update on the environmental research projects (see Attachment 12).

12) Legal review

a) Insurance Coverage for Expert Panel

Mr. Marzouk updated the panel on insurance coverage for the Expert Panel (see Attachment 13).

b) Expert Panel Communications Policy

Mr. Marzouk discussed a draft communication policy. The Panel approved the proposed policy with some minor changes. The policy will be finalized and posted on the Expert Panel's website. Recent inquiries received via the website were shared with the Panel.

c) Interaction between Expert Panel and RIFM Board of Directors: What Level is Appropriate and Desirable?

Mr. Marzouk gave a presentation and led a Panel discussion regarding the appropriate level of interaction between the Expert Panel and the RIFM Board of Directors.

d) Legal Issues in the Workplace

Mr. Marzouk gave a presentation on Title VII and the Expert Panel.

e) Review of Conflict of Interest Policy (General Discussion, Responses to Questions Raised by Panel)

Mr. Marzouk reviewed the Expert Panel Conflict of Interest Policy, including any questions Panel Members might have regarding the implementation of that policy.

f) Status and Timing of Expert Panel Self-Assessment Survey

Mr. Marzouk reported that he will be liaising with one or more Expert Panel members to develop the Expert Panel Self-Assessment Survey. The present goal is to conduct the survey and present the results in 2018.

- g) Status and Timing of Independent Audit of Expert Panel's Compliance with its Policies and Procedures

Mr. Marzouk reported that for the goal is to undertake an independent audit of the Expert Panel's compliance with its policies and procedures later in 2018 or early 2019.

- h) Miscellaneous Issues (Q and A with Panel)

Mr. Marzouk concluded by asking if the Panel had any other legal or related questions, issues or concerns; none were raised by the Panel.

13) Update on QRA2 Implementation

a) A.M Api Presentation on QRA2

Dr. Api gave a presentation and update on the QRA2 methodology and incorporation into the RIFM safety assessments (see Attachment 14).

14) Review Safety Assessments – Batch 3

CAS#	Material Name	Tab	Status
94134-03-9	cis-3-Octenyl propionate	Tab 132	Approved
94201-19-1 and 91069-37-3	1-Oxaspiro[4.5]decan-2-one, 8-methyl-	Tab 133	Approved
91069-40-8	1-Oxaspiro[4.5]decan-2-one, 8-ethyl-, trans-	Tab 134	Approved
4625-90-5	1-Oxaspiro[4.5]decan-2-one, 8-(1-methylethyl)-, trans-	Tab 135	Approved
3/2/6051	Hexahydro-3H-benzofuran-2-one	Tab 136	Approved
54491-17-7	3-Ethylhexahydro-2(3H)-benzofuranone	Tab 137	Approved
90530-04-4	2-Propanol, reaction products with boron trifluoride and 5-ethylidenebicyclo[2.2.1]hept-2-ene	Tab 138	Approved with changes
84434-18-4	N,2-Dimethyl-N-phenylbutyramide	Tab 139	Approved
406488-30-0	Butanamide, 2-ethyl-N-methyl-N-(3-methylphenyl)-	Tab 140	Approved
68228-09-1	Ethyl 2-[[[2,4(or3,5)-dimethyl-3-cyclohexen-1-yl]methyl]amino]benzoate	Tab 141	Insufficient data; environmental
1129-62-0	2-Butanone, phenylhydrazone	Tab 142	Approved
95-16-9	Benzothiazole	Tab 143	Approved
103-84-4	Acetanilide	Tab 144	Approved with changes
1188-02-9	2-Methylheptanoic acid	Tab 145	Approved
1561-11-1	Hexanoic acid, 4-methyl-	Tab 146	Approved
16493-80-4	4-Ethyl octanoic acid	Tab 147	Approved
45019-28-1	4-Methylnonanoic acid	Tab 148	Approved
4536-23-6	2-Methylhexanoic acid	Tab 149	Approved

54947-74-9	4-Methyloctanoic acid	Tab 150	Approved
97-61-0	2-Methylvaleric acid	Tab 151	Approved
565-62-8	3-Methylpent-3-en-2-one	Tab 152	Approved with changes
81786-75-6, 81786-73-4, 86115-11-9, 81786-74-5 mixture	(Z)-3,4,5,6,6-Pentamethylhept-3-en-2-one	Tab 153	Approved
54815-13-3	Nonane, 1,1-diethoxy-	Tab 154	Approved
142653-61-0	3-(cis-3-Hexenyloxy)propanenitrile	Tab 155	Approved
6789-80-6, 4440-65-7 and 69112-21-6	3-Hexenal	Tab 156	Approved
6728-31-0	4-Heptenal	Tab 157	Approved
2277-19-2	cis-6-Nonenal	Tab 158	Approved
65405-70-1, 21662-09-9 and 30390-50-2	cis-4-Decen-1-al	Tab 159	Approved
58296-81-4	8-Undecenal	Tab 160	Approved
143-14-6	9-Undecenal	Tab 161	Approved
21944-98-9 and 30390-51-3	(Z)-4-Dodecenal	Tab 162	Approved
4501-58-0	2,2,3-Trimethyl-3-Cyclopentene-1-acetaldehyde	Tab 163	Approved
67845-46-9	(4-Methylphenoxy)acetaldehyde	Tab 164	Approved
81782-89-0	2,4,4,7-Tetramethylnona-6,8-dien-3-one	Tab 165	Approved
502847-01-0	Spiro[5.5]undec-8-en-1-one, 2,2,7,9-tetramethyl-	Tab 166	Approved
42370-07-0	1-(3,3-Dimethylbicyclo[2.2.1]hept-2-yl)ethane-1-one	Tab 167	Approved
144020-22-4 and 28371-99-5	Methyl 2,6,10-trimethylcyclododeca-2,5,9-trien-1-yl ketone	Tab 168	Approved
615-13-4	2H-Inden-2-one, 1,3-dihydro-	Tab 169	Approved
131812-67-4, 131812-52-7	2,4-Dimethyl-2-(5,6,7,8-tetrahydro-5,5,8,8-tetramethyl-2-naphthalenyl)-1,3-dioxolane	Tab 170	Insufficient data; environmental

15) Human Health Research Projects

a) Epidemiology

Prof. Bruze reported that the manuscript on the study of the validation of clinical relevance algorithm from the EDEN study is still being drafted.

b) Elicitation Threshold Study on Eugenol

Dr. Api will follow-up with a conference call to review the revised draft report with Drs. Bruze and Belsito.

c) Presentation by R. Parakhia – In vitro Dermal Sensitization Research Project Update (webinar)

Dr. Parakhia gave a presentation in which he updated the Panel on the RIFM in vitro dermal sensitization research project (see Attachment 15)

16) Presentation by D. Botelho – Respiratory Research Projects

Dr. Botelho gave a presentation in which she updated the Panel on the RIFM respiratory research project (see Attachment 16)

17) Presentation RIFM TTC Research Update by D. Botelho and A. Patel (webinar)

Dr. Patel updated the Panel on the progress of the oral TTC project (see Attachment 17). The Panel would be interested to learn more about the TTC analysis with more granularity in the future. Dr. Botelho updated the Panel on the progress of the inhalation TTC project (see Attachment 18).

18) IFRA Standards

a) Furfural

Dr. Patel remained on the phone for the discussion of furfural. It is not possible to conduct a benchmark dose approach because no NOAEL and no dose response was observed in the NTP 2-year carcinogenicity assay. The Panel recommended that the reference dose of 0.003 mg/kg/day be used based on the risk assessment by US EPA, Integrated Risk Information System (IRIS) Chemical Assessment Summary National Center for Environmental Assessment (EPA, 1988).

19) Future Meeting Dates

- | | | |
|-----------------------|-------------------|------------|
| • Monday – Wednesday | May 21-23, 2018 | New Jersey |
| • Monday – Wednesday | Aug. 27-29, 2018 | Stockholm |
| • Monday – Wednesday | Jan. 28-30, 2019 | Miami, FL |
| • Monday – Wednesday | May 20-22, 2019 | Rome |
| • Monday – Wednesday | Sept. 23-25, 2019 | New Jersey |
| • Thursday – Saturday | Jan. 23-25, 2020 | Miami, FL |

Respectfully submitted,



Anne Marie Api, PhD
Vice President, Human Health Sciences
(May 21, 2018)

- Attachment 1: Presentation on the safety assessment update and metrics prepared by Dr. Romine
- Attachment 2: Presentation by Dr. Api on an approach to conducting safety assessments for low exposure synthetic fragrance materials
- Attachment 3: Presentation by webinar from Dr. Salvito on general approach to safety assessments for Natural Complex Substances (NCSs)
- Attachment 4: Presentation by Dr. Date on NCSs
- Attachment 5: Presentation by Ms. Lapczynski on NCSs
- Attachment 6: Presentation by Dr. Botelho on NCSs
- Attachment 7: Presentation by Ms. Ritacco on NCSs
- Attachment 8: Presentation by Mr. Thakkar on NCSs
- Attachment 9: Presentation by Ms. Tsang on NCSs
- Attachment 10: Presentation by Dr. Parakhia on NCSs
- Attachment 11: Presentation by Dr. Dr. Date on chemical grouping and its impact on read across
- Attachment 12: Presentation by Ms. Lapczynski on an update on the environmental research projects
- Attachment 13: Presentation by Mr. Marzouk insurance coverage for the Expert Panel
- Attachment 14: Presentation by A.M Api on QRA2
- Attachment 15: Presentation by Dr. Parakhia on the RIFM in vitro dermal sensitization research project
- Attachment 16: Presentation by Dr. Botelho on the RIFM respiratory research project
- Attachment 17: Presentation by Dr. Patel on the progress of the oral TTC project
- Attachment 18: Presentation by Dr. Botelho on the progress of the inhalation TTC project